



CLEAN WATER ACT - 208 AMENDMENT -

**APPLICATION FOR
MARICOPA ASSOCIATION OF GOVERNMENTS**

**PREPARED ON BEHALF OF
THE TOWN OF BUCKEYE BY PERC & PACE, INC. :
TARTESSO WATER RECLAMATION FACILITY &
TOWN OF BUCKEYE**

**APRIL 2003
(REVISED MAY 2003)**



PREPARED BY:

PACE
PACIFIC ADVANCED
CIVIL ENGINEERING, INC.



ENVIRONMENTAL SERVICES
DEPARTMENT

Albert F. Brown, RS, MPA, Director

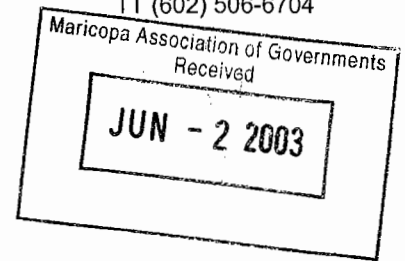
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WATER AND WASTE MANAGEMENT
DIVISION

John A. Power, PE, Division Manager

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May 28, 2003

Maricopa Association of Governments
302 North 1st Avenue, Suite 300
Phoenix, Arizona 85003

Attention: Ms. Lindy Bauer, Environmental Program Coordinator
Re: Town of Buckeye Proposed 208 Amendment for Tartesso West WRF

Dear Ms. Bauer:

Pacific Advanced Civil Engineering, Inc. (PERC) has submitted a proposed 208 Amendment to the Maricopa County Environmental Services Department (MCESD) for the Town of Buckeye wastewater treatment facilities for the Tartesso Development, a master planned community to be developed by Stardust Development. The development will be constructed in an area within the Town of Buckeye, generally between 323rd Avenue and Turner Road, north of Interstate 10, and south of Glendale Avenue.

In accordance with the MAG 208 Water Quality Management Plan, the proposed 208 Amendment for the facility was submitted to this Department for comment, since the facility is located within three miles of the unincorporated area of Maricopa County.

The proposed 208 Amendment was originally submitted April 9, 2003, and revised on May 16, 2003. Based on a review of the revised document, the Maricopa County Environmental Services Department, Water and Waste Management Division acknowledges that the proposed Tartesso West WRF is not in conflict with Maricopa County plans for the area.

MCESD provides this letter of support, conditioned on final execution of the Agreement with the Town of Buckeye, whereby the Town of Buckeye will be the permanent owner of the proposed wastewater collection, treatment, and disposal facilities upon completion of construction of the first phase of the facilities and prior to startup. As such, the Town will be the responsible party for the MCESD Annual Operating Permit, as well as appropriate Federal, State, and County discharge / recharge / reuse permits.

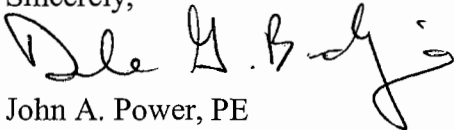
Page 2 of 2
May 28, 2003
Ms. Lindy Bauer
Town of Buckeye for Tartesso West WRF


Should the Town of Buckeye not be the owner of the wastewater facilities, this Department will withdraw its support for the project.

Please note that MCESD has not reviewed, nor approved, the design of the facilities as part of the 208 Small Plant Review. Any technical issues that remain will need to be resolved during the design phase of the project. Approval to Construct and Approval of Construction must be obtained from this Department prior to start of construction and startup, respectively.

If you have any questions or comments, please feel free to contact Mr. Dale Bodiya, PE, or myself, at 506-6666.

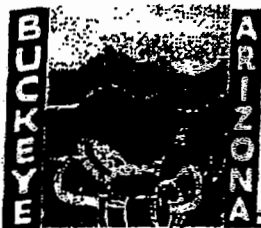
Sincerely,



 John A. Power, PE
Manager, Water and Waste Management Division

cc:

Mr. Albert F. Brown, RS, MPA, Director, MC Environmental Services Department
Mr. Dale Bodiya, PE, Manager, Water / Wastewater Treatment Section, MCESD
ADEQ, Manager, Water Permits and Plan Review Section
Mr. James Matthews, PE, PERC
Mr. Joe Blanton, Town Manager, Town of Buckeye
File



Town of Buckeye

April 1, 2003

Ms. Brenda Geisen, Environmental Program Coordinator
Maricopa Association of Governments
302 North 1st Avenue, Suite 300
Phoenix, Arizona 85003

SUBJECT: MAG 208 AMENDMENT - BUCKEYE, ARIZONA

Dear Ms. Geisen:

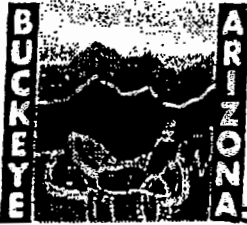
The Town of Buckeye is submitting a 208 Amendment for the Buckeye Planning Area. In accordance with the MAG 208 Water Quality Management Plan, we are officially requesting that you initiate the amendment process to consider the Tartesso West Area and the Tartesso West Water Reclamation Facility.

We look forward to working with you and appreciate your assistance to facilitate the MAG approval process for this 208 Amendment.

Sincerely,
Town of Buckeye

Joseph A. Blanton
Town Manager

Cc: Doug Do, PACE



Town of Buckeye

April 8, 2003

Ms. Brenda Geisen
Maricopa Association of Governments (MAG)
302 North 1st Avenue, Suite 300
Phoenix, AZ 85003

Dear Ms. Geisen:

With regard to the MAG 208 Amendment for the proposed Tartesso West WRF, the Town of Buckeye formally intends to accept the future transfer of ownership of the facility's completed phases from Stardust Development Corporation with corresponding operation and maintenance responsibilities. The Town of Buckeye recognizes that Pacific Environmental Resources Corporation, Inc. (PERC) is the designated design/build contractor under contract with Stardust.

If you have any questions or comments regarding the Town of Buckeye's role with respect to the proposed Tartesso West WRF, do not hesitate to contact me at (623) 386-4691.

Sincerely,
Town of Buckeye

Joseph Blanton
Town Manager

cc: Doung Do, PACE, Inc.

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EXECUTIVE SUMMARY

The water quality management plan for Maricopa County, AZ based on Section 208(2)(b) of the Clean Water Act (CWA) is provided by the Maricopa Association of Governments (MAG). The goal of the 208 Plan is to identify area-wide waste treatment and water quality management problems and establish a program to alleviate potential problems. As discussed in the October, 2002 MAG 208 Water Quality Management Report, areas of the Town of Buckeye including “Tartesso and Tartesso North Developments” were not included in the plan due to the preliminary planning status of the area (page 4-50). Stardust Development Corporation is in the process of land development in the Town of Buckeye including Tartesso Developments. Thereby, detailed planning projections are now available for this region. Stardust plans to implement a new wastewater collection system and treatment facility to service portions of Tartesso Developments and other surrounding land areas within the Town of Buckeye encompassing approximately 13,500 acres. Therefore, the purpose of this application is to request a Clean Water Act Section 208 amendment to the current MAG Regional Water Quality Management Plan. The requested amendment includes the following:

Amendment Item:

The construction of a new Town of Buckeye owned and operated 18 MGD (Phase I - 1.2 MGD) Tartesso Water Reclamation Facility (WRF) in the Town of Buckeye. The new facility will reclaim wastewater flows to Arizona Department of Environmental Quality (ADEQ) Title 18 Class A+ effluent standards from an approximate 13,500 acre region within Buckeye in Regional Analysis Zones (RAZ) 253, 277, 278, and 340 including Tartesso West and Tartesso North developments. The facility will be operated starting from zero flow with accommodations for temporary low-loading conditions. An Aquifer Protection Permit (APP) permit and potentially an ADWR Aquifer Storage and Recovery permit will be completed for groundwater recharge of effluent from the facility into adjacent recharge basins. Additional reuse and/or discharge of effluent to a water of the US (i.e. tributary of the Hasayama River) may ultimately be achieved from the facility via effluent reuse and/or AZPDES permits. The Tartesso WRF will be designed and constructed in multiple phases which will be sized based on rates of wastewater generation from the service area.

By providing a new facility in the region, effluent can be used for recharge and potentially indirect reuse from the underlying aquifer or direct non-potable reuse which will reduce the demand for ground or surface supplies by proposed developments. By constructing a new facility near proposed developments, wastewater collection and effluent distribution systems and pumping requirements will be considerably smaller in size and less costly as compared to conveying flows to and from existing or other proposed facilities in the surrounding area.

This CWA 208 Amendment application provides information on the proposed Tartesso WRF. The following sections describe how the Section 208 requirements are addressed including alternatives, permitting, treatment facility design, sludge management, construction, financing, impacts, and public participation.

ABBREVIATIONS

| | |
|----------|---|
| ADEQ | Arizona Department of Environmental Quality |
| ADWR | Arizona Department of Water Resources |
| APP | Aquifer Protection Permit |
| CFR | Code of Federal Regulations |
| EPA | Environmental Protection Agency |
| MAG | Maricopa Association of Governments |
| MGD | Million gallons per day |
| MSDS | Material Safety Data Sheets |
| O&M | Operations and maintenance |
| P.A.C.E. | Pacific Advanced Civil Engineering, Inc. |
| RAZ | Regional Analysis Zone |
| WRF | Water Reclamation Facility |
| WWTP | Wastewater Treatment Plant |

| Requirement | Summary of How Requirements are Addressed | Page | Heading |
|---|--|------|---------|
| AUTHORITY | | | |
| Proposed Designated Management Agency (DMA) shall self-certify that it has the authorities required by Section 208(a)(2)(B) of the Clean Water Act to implement the plan for its proposed planning and service areas. Self-certification shall be in the form of a legal opinion by the DMA or entity attorney. | | | |
| 20-YEAR NEEDS | | | |
| Clearly describe the existing wastewater treatment (WWT) facilities: | | | |
| <ul style="list-style-type: none"> Describe existing WWT facilities. | There are no existing sewerage collection systems or treatment facilities within the proposed 13,500 acre service area (RAZ 253, 277, 278, and 340) within the Town of Buckeye. The Sundance WRF and the Town of Buckeye WWTP are within RAZ 278 but outside of the proposed new facility service area. | 13 | |
| <ul style="list-style-type: none"> Show WWT certified and service areas for private utilities and sanitary district boundaries, if appropriate. | There are no private utilities or sanitary districts within the proposed service area. | 23 | |
| Clearly describe alternatives, the recommended WWT plan, and factors that affect discharge: | | | |
| <ul style="list-style-type: none"> Provide POPTAC population estimates (or COG-approved estimates only where POPTAC not available) over 20-year period. | Population projections for the new service area were not included in the October, 2002 MAG Water Quality Management Report (page 4-50). Thus, population projections for the service area were provided by Stardust Development. Population estimates in the service area include Tartesso North, Tartesso West, and surrounding area in the Town of Buckeye (not owned by Stardust Development Corporation). The surrounding area was assumed to have comparable land-use characteristics to Tartesso in the analysis. A 20-year projection of the 13,500 acre service area at full build-out was estimated to be 49,700 mixed density residential units (19,400 units in Tartesso West, 12,500 units in Tartesso North, and 17,800 units in non-Stardust-owned surrounding area). Assuming an approximate average of 3.2 persons per low or medium density unit and 2.0 persons per high density unit, | 18 | |

| Requirement | Summary of How Requirements are Addressed | Page | Heading |
|---|---|------|------------|
| | approximately 139,000 people are estimated for the new service area assuming full build-out by 2022, starting from a near zero population in 2003. | | |
| <ul style="list-style-type: none"> Provide wastewater flow estimates over the 20-year planning period. | <p>Using 350 gallons/unit/day, wastewater flows to the facility are estimated to exceed 1.0 MGD in 2007, 2.0 MGD in 2008, 5.0 MGD in 2010, and 10.0 MGD in 2014. Approximately 18 MGD is estimated to be reached in 2022 (all flows presented are average day quantities) assuming 100% build-out of the service area. The 350 gallons/day/unit quantity used in the projections is estimated to account for additional generation from commercial, educational, and mixed land use. Actual wastewater flow generation is anticipated to be lower based on measured flows for other new developments in the area. In addition, the build-out of the service area may not reach 100% in the next 20 years.</p> | 20 | |
| <ul style="list-style-type: none"> Illustrate the WWT planning and service areas. | <p>The proposed Tartesso WRF will provide wastewater treatment services for approximately 13,500 acres of area comprised of proposed developments on the west side of the Town of Buckeye, north of interstate 10 (I-10) and south of Northern Avenue. The developments in the service area include Tartesso West and Tartesso North provided by Stardust Development Corporation and surrounding area within the Town of Buckeye not owned by Stardust.</p> | 17 | Appendix A |
| <ul style="list-style-type: none"> Describe the type and capacity of the recommended WRF. | <p>The Tartesso WRF will include a hybrid SBR activated sludge treatment system with advanced tertiary treatment compatible with ADEQ Title 18 Class A+ effluent standards. The facility will be equipped with screening, grit removal, biological BOD reduction and nitrification/denitrification, clarification, filtration, and UV disinfection. The facility will also incorporate sludge storage, treatment, and processing capability (the facility will be capable of producing a minimum of Class B biosolids after Phase I – during Phase I Class B biosolids</p> | 20 | Appendix B |

| Requirement | Summary of How Requirements are Addressed | Page | Heading |
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| | <p>will be achieved for flows less than 600,000 gallons/day). Odor and noise control and aesthetic measures will also be incorporated into the design in accordance with the Title 18 Arizona Administrative Code. Odor control will be provided on all tankage, equipment, and the sludge processing area. The first phase of the Tartesso WRF will provide 1.2 MGD average daily flow treatment capacity (2.4 MGD peak day and 3.6 MGD peak hour). Phased expansions of the facility will ultimately provide the full-build out capacity estimated not to exceed 18 MGD average day flow. This amendment addresses all phases (full-build out) of the Tartesso facility.</p> | | |
| <ul style="list-style-type: none"> Identify water quality problems, consider alternative control measures, and recommend solution for implementation. | <p>By complying with ADEQ Title 18 Class A+ effluent standards, no foreseeable water quality issues are anticipated due to the use of the Tartesso WRF's reclaimed water. The effluent water will be of sufficient quality for unrestricted reuse. Also, the total nitrogen and coliform limits for Class A+ effluent are below the applicable water quality standards for groundwater point use.</p> | 22 | |
| <ul style="list-style-type: none"> If private WWT utilities with certificated areas are within the proposed regional service area: define who (municipal or private utility) serves what area and when. Identify whose sewer lines can be approved in what areas, when? | <p>Currently, no private utilities are certificated and no infrastructure is in place within the proposed Tartesso WRF service area. The Town of Buckeye will become the utility which will service the residents of the proposed service area.</p> | 23 | |
| <ul style="list-style-type: none"> Describe method of effluent disposal and reuse sites (if appropriate). | <p>Effluent from all phases of the Tartesso WRF is anticipated to be used for groundwater recharge within basins adjacent to the facility. An Aquifer Protection Permit (APP) and potentially an ADWR constructed underground storage facility permit will be provided for groundwater recharge. An alternative discharge site to waters of the US (e.g. Hasayama River & tributaries) may also be sought which will require an ADEQ AZPDES permit. In addition, following significant development effluent</p> | 22 | |

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| | reuse may be developed to provide lake source water or irrigation of golf courses and/or parks within the Town of Buckeye. An ADEQ reuse permit will be provided for such direct reuse. | | |
| <ul style="list-style-type: none"> Describe other wastewater treatment options that were considered. | <p>Two alternatives were considered:</p> <p>Alt. #1 – Provide additional sewerage collection and effluent distribution piping and conveyance to transport flows to and from existing or other proposed plants in Buckeye, Glendale, or Surprise. Additional treatment infrastructure would likely be necessary to provide for significant increases in loading from the new service area.</p> <p>Alt. #2 – Provide new wastewater collection and treatment facilities within the service area via the Tartesso WRF – owned and operated by the Town of Buckeye. Use effluent on-site for groundwater recharge and potentially for reuse.</p> | 15 | |
| <ul style="list-style-type: none"> If Sanitary Districts are within a proposed planning or service area, describe who services the Sanitary Districts and when. | There are no sanitary districts currently within the proposed Tartesso service area. The Town of Buckeye will provide wastewater service following development of the region. | 23 | |
| <ul style="list-style-type: none"> Describe ownership of land proposed for plant sites and reuse areas. | The Tartesso WRF will be located on property owned by Stardust Development. Following the construction and acceptance of each phase of facility build-out, the ownership will be transferred to the Town of Buckeye. Recharge facilities accepting reuse water will be on land transferred to the Town of Buckeye from Stardust Development. Additional reuse sites potentially incorporated into future developments are owned by developers including Stardust. | 24 | Appendix D |
| <ul style="list-style-type: none"> Address time frames in the development of the treatment works. | Phase I of Tartesso WRF is expected to be substantially complete in November, 2004 assuming facility construction is commenced by November, 2003. The Phase I facility will have separate equipment and control measures incorporated into the plant to treat low-flows: 1) | 24 | Appendix C |

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| | vault-and-haul <20,000 gallons per day (gpd)) and 2) temporary equipment treating <120,000 gpd until development is able to provide larger loadings required for full-facility operation. Additional facility phases for the Tartesso WRF are anticipated to be designed when average day wastewater flows exceed 70% of the current plant capacity. The timing of expansions will therefore be dependent on rates of population and resultant wastewater flow increases. | | |
| <ul style="list-style-type: none"> Address financial constraints in the development of the treatment works. | There are no foreseeable financial constraints associated with the WRFs' design, construction, and operation other than enabling the development to be competitive within the greater Phoenix, AZ market. | 26 | Appendix D Section 11 |
| <ul style="list-style-type: none"> Describe how discharges will comply with EPA municipal and industrial stormwater discharge regulations (Section 405, CWA). | All stormwater generated within the project sites will be detained on-site following completion of construction (zero stormwater discharge will occur from the property of the Tartesso WRF). During construction, flows will be discharged from the site under an AZPDES temporary construction discharge permit. | 23 | |
| <ul style="list-style-type: none"> Describe how open areas and recreational opportunities will result from improved water quality and how these will be used. | Recharge basins will provide habitat for numerous open-water plant and animal species which will enhance aesthetic value. Lakes potentially receiving effluent may provide recreational fishing, boating, and hiking/walking opportunities for residents. Effluent irrigation provides the ability to grow plants and grass for aesthetics and provide recreation such as golf, soccer, baseball, etc. for residents. | - | |
| <ul style="list-style-type: none"> Describe potential use of lands associated with treatment works and increased access to water-based recreation, if applicable. | Lakes potentially receiving effluent may provide recreational fishing, boating, and hiking/walking opportunities for residents. | - | |

| REGULATIONS | | | |
|---|--|----|------------|
| <ul style="list-style-type: none"> Describe types of permits needed, including NPDES, APP and reuse | <p>The new WRF will require an Aquifer Protection Permit (APP), a MCESD Non-title V air quality permit, MCESD Annual Operations Permit, MCESD Approval to Construct (ATC), MCESD Approval of Construction (AOC), and potentially ADEQ effluent reuse, ADWR Underground Storage and Recovery, AZPDES permits (dependent on future reuse and/or discharge sites such as the Hasayama River and/or associated tributaries). Possibly an ACOE Clean Water Act 404 permit will be needed if site construction exists within a water of the U.S.</p> | 23 | |
| <ul style="list-style-type: none"> Describe restrictions on NPDES permits, if needed, for discharge and sludge disposal. | <p>If an AZPDES permit is sought for an alternative effluent discharge location, no restrictions on the permit are anticipated provided the facility is in compliance with ADEQ Title 18 Class A+ water quality standards.</p> | - | |
| <ul style="list-style-type: none"> Provide documentation of communication with ADEQ Permitting Section 30 to 60 days prior to public hearing regarding the need for specific permits. | <p>PERC, Inc., in conjunction with the Town of Buckeye, is in the process of obtaining necessary permits from ADEQ and potentially ADWR for the Tartesso WRF.</p> | - | Appendix F |
| <ul style="list-style-type: none"> Describe pretreatment requirements and method of adherence to requirements (Section 208 (b)(2)(d), CWA). | <p>No industrial user will be connected to the system (only residential and commercial wastewater) and thus no pre-treatment is required.</p> | 24 | |
| <ul style="list-style-type: none"> Identify, if appropriate, specific pollutants that will be produced from excavations and procedures that will protect ground and surface water quality (Section 208(b)(2)(K) and Section 304, CWA). | <p>Nutrient and metal pollutants typically bonded to sediment may be introduced by excavation during construction of the Tartesso WRF. Stormwater detention areas consisting of depressions or swales can effectively settle potential increases in suspended solids during construction.</p> | 26 | |
| <ul style="list-style-type: none"> Describe alternatives and recommendations in the disposition of sludge generated (Sections 405, CWA and 40 CFR 503). | <p>Sludge will be stored, treated, and dewatered on-site for the Tartesso WRF. Biological reactors will provide processes to significantly reduce pathogens and volatile solids composition. The facility will provide aerated storage, digestion, and dewatering capabilities. In Phase I sludge will be processed to meet a minimum of EPA Class B</p> | 21 | |

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| | reuse requirements for sludge of exceptional quality (EQ) up to plant influent flow rates of 600,000 gallons per day. Following the completion of Phase II, the facility will produce Class B biosolids for the remainder of the facility build-out. Treated and dewatered sludge from Phase I beyond 600,000 gallons/day is anticipated to be landfilled. Class B bio-solids from Phase I or subsequent phases can be reused for land application or fertilization of non-contact crops. | | |
| <ul style="list-style-type: none"> Define any non-point issues related to the proposed facility and outline procedures to control them. | No non-point discharges are anticipated. | - | |
| <ul style="list-style-type: none"> Describe process to handle all mining runoff, orphan sites, and underground pollutants, if applicable. | Not applicable. | - | |
| <ul style="list-style-type: none"> If mining related, define where collection of pollutants has occurred, and what procedures are going to be initiated to contain contaminated areas. | Not applicable. | - | |
| <ul style="list-style-type: none"> If mining related, define what specialized procedures will be initiated for orphan sites, if applicable. | Not applicable. | - | |
| CONSTRUCTION | | | |
| <ul style="list-style-type: none"> Define construction priorities and time schedules for initiation and completion. | Construction of Phase I of Tartesso WRF is expected to be completed by approximately November, 2004 assuming facility construction is commenced by November, 2003. Near the end of Phase I construction, the facility will be able to accept flows for vault-and-haul operation to the influent lift station up to 20,000 gallons per day (<70 housing units). Hauling will be provided to another PERC, Inc. operated facility. Following Phase I Approval of Construction by MCESD, the facility will accept wastewater flows into the main facility provided adequate loadings are available for low-flow processing. As average day flows exceed 70% of the facility's capacity (e.g. 840,000 gpd in Phase I), design of subsequent phases will be initiated, followed by construction as necessary. Construction priorities consist of equipment | 24 | Appendix C |

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| | procurement and proper installation, quality control, and project coordination/documentation. | | |
| <ul style="list-style-type: none"> Identify agencies that will construct, operate, and maintain the facilities and otherwise carry out the plan. | PERC, Inc. will construct, operate, and maintain the Tartesso WRF. The Town of Buckeye will oversee all operation and maintenance services of the WRF. | 26 | |
| <ul style="list-style-type: none"> Identify construction activity-related sources of pollution and set forth procedures and methods to control, to the extent feasible, such sources. | Pollutants associated with construction are anticipated to be solid waste, paint, fuel, lubrication oils, etc. typical of such activities. The containment and proper disposal of such materials will be performed to the maximum extent practicable. In addition, construction activities will abide by all federal and state rules & regulations. | 26 | |
| FINANCING AND OTHER MEASURES NECESSARY TO CARRY OUT PLAN | | | |
| <ul style="list-style-type: none"> If plan proposes to take over a certified private utility, describe how and when financing will be managed. | Not applicable. | - | |
| <ul style="list-style-type: none"> Describe any significant measure necessary to carry out the plan (e.g., institutional, financial, economic, etc.) | As the phasing of the treatment facility is dependent on population increases, design and construction is pending on completion and the success of proposed developments. | 20 | |
| <ul style="list-style-type: none"> Described proposed method(s) of community financing. | A copy of the draft Stardust Development Agreement is included in Appendix D which provides information on project financing for the Tartesso WRF. | 26 | Appendix D |
| <ul style="list-style-type: none"> Provide financial information to assure DMA has financial capability to operate and maintain wastewater system over its useful life. | Stardust Development Corporation will incur the financial shortfall difference between the cost for operation and maintenance of the facility and wastewater revenues from connection fees, etc. The Service Section (Section 11) of the draft Development Agreement describes this Shortfall Agreement to be implemented for the Tartesso WRF. | 26 | Appendix D Section 11 |
| <ul style="list-style-type: none"> Provide a time line that outlines the period of time necessary for carrying out plan implementation. | Completion of the initial phase (Phase I) of the Tartesso WRF is anticipated to be November, 2004 assuming construction commences by November, 2003. Subsequent phasing of the facility will be completed as dictated by wastewater generation and the capacity of the plant. Assuming 100% | 24 | Appendix C |

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| | build-out in the service area, the estimated capacity of the facility is 18 MGD in 2022. | | |
| <ul style="list-style-type: none"> Provide financial information indicating the method and measures necessary to achieve project financing (Section 201 CWA or Section 604 may apply). | A copy of the draft Stardust Development Agreement is included in Appendix D which provides information on project financing for the Tartesso WRF. | 26 | Appendix D |
| IMPLEMENTATION | | | |
| Describe impacts and implementation requirements of the Plan: | | | |
| <ul style="list-style-type: none"> Describe impacts on existing WWTFs (e.g., Sanitary district, infrastructure/facilities, and certificated areas). | No existing infrastructure or facilities exist within the Tartesso service area. The Town of Buckeye will oversee operation and maintenance of the facility. | 14 | |
| <ul style="list-style-type: none"> Describe how and when existing package plants will be connected to a regional system. | Currently no plants exist in the proposed service area which would be connected to the proposed Tartesso WRF regional system. | 14 | |
| <ul style="list-style-type: none"> Describe the impact on communities and businesses affected by the plan. | There are no anticipated negative impacts to the community or businesses due to this plan. Positive impacts expected for the community and businesses include wastewater collection services, aquifer recharge with potential subsequent indirect reuse, and potential direct reuse. | 26 | |
| <ul style="list-style-type: none"> If a municipal WWT system is proposed, describe how WWT service will be provided until the municipal system is completed (i.e., will package plants and septic systems be allowed and under what circumstances; interim services). | Houses will not be occupied prior to the completion and approval of the low-flow portions of the Tartesso WRF (vault-and-haul operation for flows < 20,000 gpd in the lift station and temporary equipment/controls for flows exceeding 20,000 gpd but less than 120,000 gpd). | 14 | |

PUBLIC PARTICIPATION

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| <ul style="list-style-type: none"> • Submit copy of mailing list used to notify the public of the public hearing on the 208 amendments. (40 CFR, Chapter 1, part 25.5) | All public notifications will be satisfied through MAG. | - | |
| <ul style="list-style-type: none"> • List location where documents are available for review at least 30 days before public hearing. | All public notifications will be satisfied through MAG. | - | |
| <ul style="list-style-type: none"> • Submit copy of the public notice of the public hearing as well as an official affidavit of publication from the area newspaper. Clearly show the announcement appeared in the newspaper at least 45 days before the hearing. | All public notifications will be satisfied through MAG. | - | |
| <ul style="list-style-type: none"> • Submit affidavit of publication for official newspaper publication. | All public notifications will be satisfied through MAG. | - | |
| <ul style="list-style-type: none"> • Submit responsiveness summary for public hearing. | All public notifications will be satisfied through MAG. | - | |

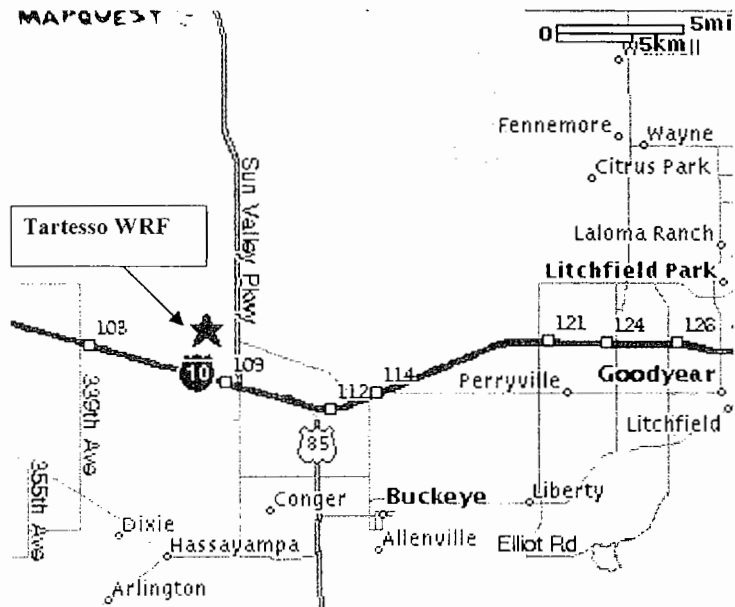
I. 20-Year Needs

The Maricopa Association of Governments (MAG) is the Designated Management Agency with the authority under Section 208(2)(b) of the Clean Water Act (CWA) to prepare the Regional Water Quality Management Plan for the Maricopa County Planning Area. The purpose of this application is to request a Clean Water Act Section 208 amendment to the current Regional Water Quality Management Plan. The requested amendment includes the following:

Amendment Item*:

The construction of a new Town of Buckeye owned and operated 18 MGD Tartesso Water Reclamation Facility (WRF) in the Southwest ¼ of Section 35 T2N R5W in the Town of Buckeye. The new facility will reclaim wastewater flows to Arizona Department of Environmental Quality (ADEQ) Title 18 Class A+ effluent standards from an approximate 13,500 acre region within Buckeye in Regional Analysis Zones (RAZ) 253, 277, 278, and 340 including Tartesso West (5,040 acres) and Tartesso North (3,750 acres) developments and surrounding areas in the Town of Buckeye (4,740 acres). The service

area for the Tartesso WRF is on the western border of the Town of Buckeye from the I-10 freeway north to Northern Avenue. The facility will be operated starting from zero flow with accommodations for temporary low-loading conditions. An Aquifer Protection Permit (APP) and potentially an ADWR Underground Storage and Recovery Permit will be completed for groundwater recharge of effluent from the facility into adjacent recharge basins. In the event that not all effluent water is recharged, an AZPDES may be sought to allow an additional point of discharge such as a tributary to the Hasayama River. Ultimately, effluent reuse to lakes, golf courses, parks, etc. may occur within the Town of Buckeye following development of the region via an ADEQ effluent reuse permit.



* The October 8, 2002 MAG 208 Report describes updating the Water Quality Plan to include new developments in the Town of Buckeye including Tartesso and Tartesso North (page 4-50) as soon as detailed information is available.

Stardust Development Corporation will finance the design and construction of the Tartesso WRF in multiple phases. Phase I will have an average day capacity of 1.2 MGD, and subsequent phasing will provide treatment up to 18 MGD average day flow at full build-out. Phasing of the facility beyond Phase I will be dependent on rates of population growth and corresponding wastewater loading increases. To conserve time, Stardust Development has opted for a design/build approach for the initial phase of this facility. Pacific Environmental Resources Corporation, Inc.(PERC) has

been selected by Stardust as the design/build/operator. Preliminary engineering design of Phase I is currently proceeding. The facility is expected to be complete and operational by November, 2004 assuming commencement of Phase I construction by November, 2003. Low-flow operation will also be incorporated into the design of Phase I to accommodate wastewater loadings starting from zero flow at the beginning of the project.

When the facility is commissioned and ready to accept wastewater flows, Stardust Development will transfer ownership of the facility along with operation responsibilities to the Town of Buckeye. After 70% of the Phase I wastewater flow design capacity is achieved, Phase II design will be initiated. The second phase expansion is anticipated to occur in approximately 2007. Subsequent phases of the facility will also be proceeded accordingly.

The following sub-sections describe existing wastewater facilities, considered alternatives for wastewater from future developments, the proposed wastewater collection and treatment system, and regulatory requirements for implementation.

A. Description of Existing Wastewater Treatment Facilities

The 13,500 acre Tartesso WRF service area encompasses regions of RAZs 253, 277, 278, and 340 within the Town of Buckeye (see Appendix A). Two existing wastewater treatment facilities are located in RAZ 278: Sundance WRF and the Town of Buckeye WWTP (see Figure 1 to the right). Proposed facilities in the Buckeye include the Blue Horizons WWTP and Varrado WRF; however, the Blue Horizons WWTP is not anticipated to be implemented. Pertaining to the existing facilities in Buckeye, both the Sundance WRF and the Town of Buckeye WWTP are approximately 12 miles from regions of the Tartesso Development and are located on opposite sides of the I-10 freeway. Treatment capacities available for both facilities (Sundance WRF and Town of Buckeye WWTP) including plans for expansion are not currently designed to accommodate wastewater flows from the proposed Tartesso WRF service area according to the MAG 208 Water Quality Report (2002).

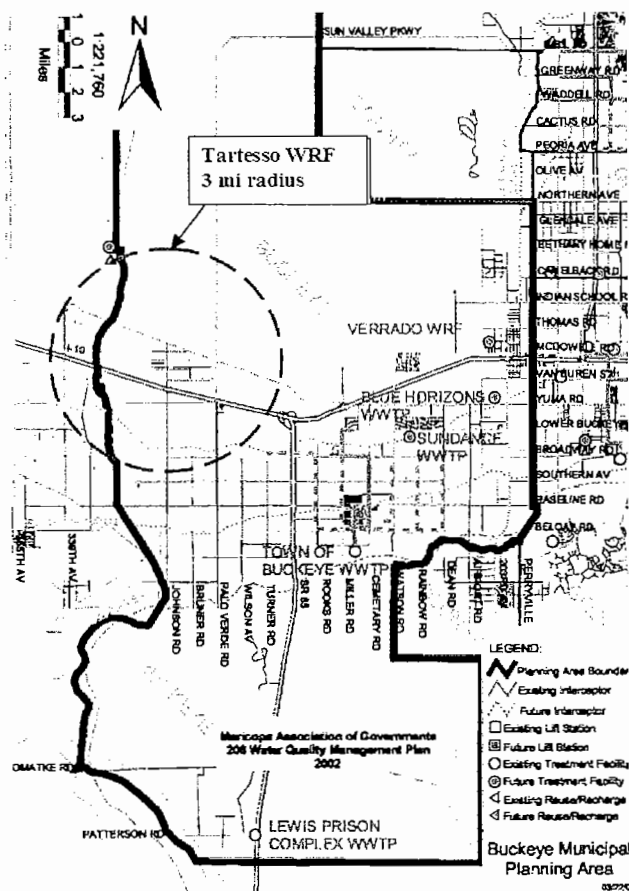


Figure 1 (right). Existing and Future Wastewater Treatment Facilities in the Town of Buckeye (purple) and Surrounding Region (October, 2002 MAG Report) – West of Buckeye is Unincorporated Maricopa County

B. Summary of Alternatives

Two alternatives were considered to evaluate the treatment of increasing wastewater flows from the proposed Tartesso WRF service area. The following alternatives were evaluated:

Alternative 1:

Providing wastewater collection and pumping infrastructure to convey flows to existing or proposed facilities in the Town of Buckeye (Town of Buckeye WWTP, Sundance WRF, Varrado WRF) or surrounding cities such as Glendale or Surprise. Increases in flow to the existing facilities would likely necessitate expansion or redesign of future phases of treatment works based on loading increases from the 13,500 acres service area.

Alternative 2:

Implementing a new wastewater collection system and treatment facility to effectively treat and reuse (i.e. recharge) new wastewater flows from proposed developments within the region.

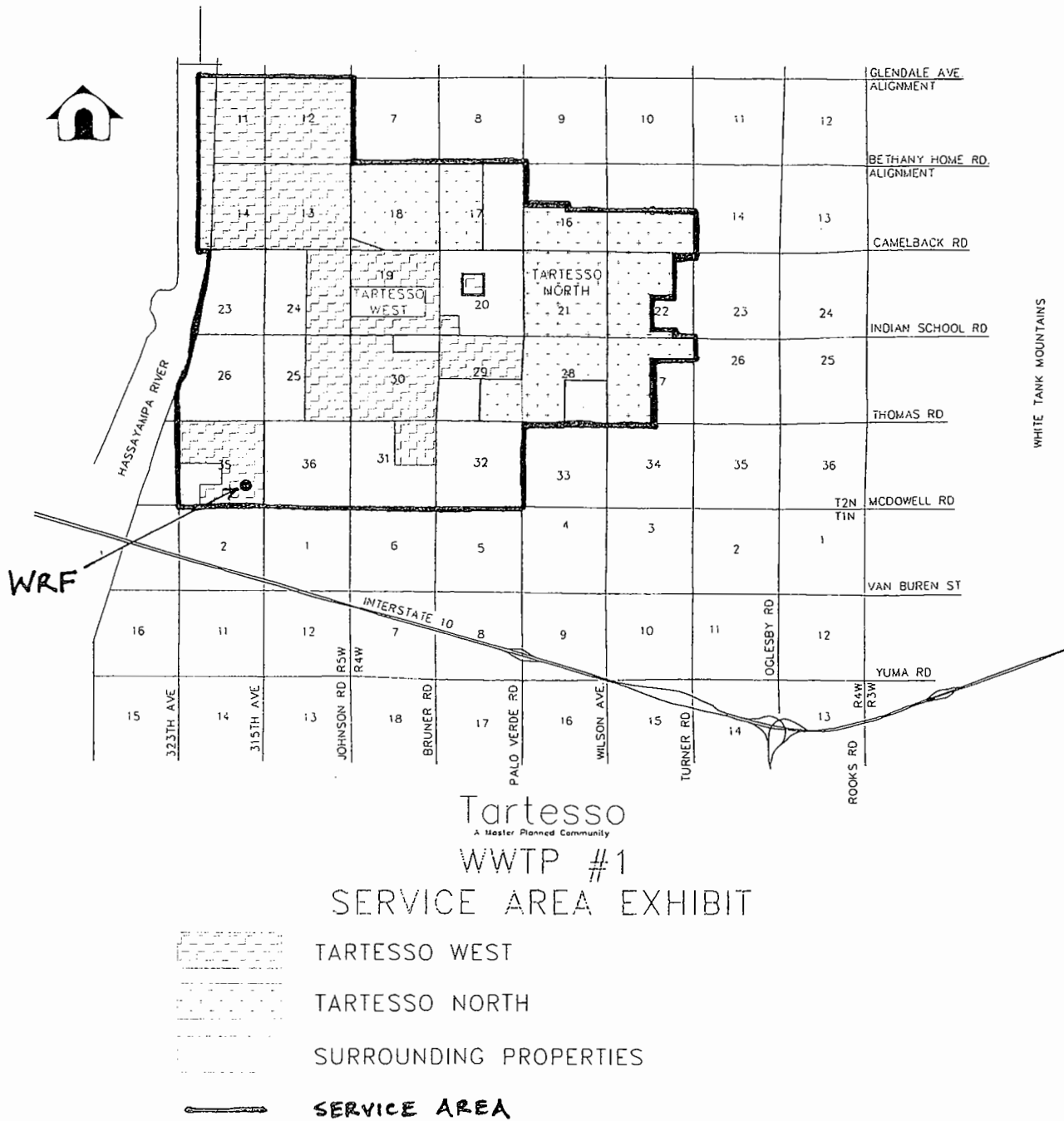
Alternative 2 (building the new Tartesso WRF) was considered more beneficial than alternative 1 (conveying wastewater and effluent flows to/from existing and other proposed facilities) with respect to cost-effectiveness and water supply management to increase supply for sustainable development. Since a majority of the needed treatment infrastructure and corresponding equipment to accommodate the new service area will need to be constructed at existing or other potential facilities in alternative 1, negligible savings can be realized by diverting flows to other treatment plants in the area. By retaining wastewater flows within the Tartesso region, benefits can be realized from groundwater recharge of the facilities effluent and potentially indirect reuse from the aquifer or direct non-potable reuse. In addition, cost savings and supply benefits can be achieved from using reclaimed water within the 13,500 acre service area instead of using existing ground and surface water supplies. Assuming effluent could be returned to the Tartesso region using Alternative 1, the cost of implementing effluent distribution systems will be considerably larger in magnitude (piping and pumping capacity) and therefore more costly than building a new facility on-site. In addition, collection system piping and potential pump stations needed to convey wastewater will be considerably smaller, if not non-existent, by building a new facility on-site. By implementing a similar hybrid SBR treatment facility to that of the nearby Sundance WRF in the Town of Buckeye, operation and maintenance of the proposed Tartesso WRF will be familiarized.

C. Discussion of Proposed Construction of the Tartesso WRF

1. Site Location, Property Ownership, and Service Area

The proposed Tartesso WRF will be constructed in Town of Buckeye, Maricopa County, Arizona. The proposed location is in the Southeast ¼ of the Southwest ¼ of Section 35 in Township 2N, Range 5W in the Town of Buckeye. Appendix A provides a map which illustrates the proposed location of the treatment facility and associated effluent recharge basins. The Tartesso WRF will be constructed on property currently owned by the Stardust Development Company. The property will be ultimately transferred to the Town of Buckeye for the purpose of maintaining and operating the facility (a copy of the development agreement is included in Appendix D). Similarly, recharge basins constructed adjacent to the site will be transferred from Stardust Development to the Town of Buckeye following development. The facility will service an estimated 13,500 acres of land within the Town of Buckeye encompassing Tartesso as well as other developments not currently owned by Stardust Development within the Town of Buckeye. Figure 2 on the following page shows the boundary of the Tartesso WRF's estimated service area including current land ownership within the service area.

Figure 2. Service Area for the Proposed Tartesso West WRF (see Appendix A for detailed aerial map and facility location)



2. Population, Water Supply, and Wastewater Generation Estimates

As stated previously, portions of four regional analysis zones (RAZs) summing approximately 13,500 acres were used to define the Tartesso WRF service area. These four areas include RAZs 253, 277, 278, and 340 within the Town of Buckeye. Comprising the service area are developments including Tartesso West (5,040 acres) and Tartesso North (3,750 acres) and surrounding areas in the Town of Buckeye (4,740 acres) not owned by Stardust Development. Table 1 below displays the maximum anticipated population in the service area for 100% build-out. Figure 2 (previous page) illustrates the regions that make up the service area.

Table 1. Projected Population in the Tartesso WRF Service Area*

| | | TARTESSO WEST (5,040 acres) | | TARTESSO NORTH (3,750 acres) | | SURROUNDING (4,740 acres) | | TOTAL UNITS | TOTAL POPULATION |
|--|--------------|--------------------------------|---------------|---------------------------------|---------------|------------------------------|---------------|----------------|---------------------|
| Land Use | Persons/Unit | Units | Population | Units | Population | Units | Population | | |
| High Density Residential | 2 | 3,393 | 6,786 | 1,851 | 3,702 | 3,191 | 6,382 | 8,435 | 16,870 |
| Medium High Density Residential | 2 | 2,168 | 4,336 | 4,050 | 8,100 | 2,039 | 4,078 | 8,257 | 16,514 |
| Medium/Medium High Density Residential | 3.2 | 170 | 544 | 0 | 0 | 160 | 512 | 330 | 1,056 |
| Medium Density Residential | 3.2 | 12,006 | 38,419 | 5,590 | 17,888 | 11,291 | 36,132 | 28,887 | 92,439 |
| Medium Density Residential/WWTP | 3.2 | 312 | 998 | 0 | 0 | 293 | 939 | 605 | 1,937 |
| Low Density Residential | 3.2 | 869 | 2,781 | 0 | 0 | 817 | 2,615 | 1,686 | 5,396 |
| Mixed Use | 3.2 | 438 | 1,402 | 1,011 | 3,235 | 0 | 0 | 1,449 | 4,637 |
| TOTAL | | 19,356 | 55,266 | 12,502 | 32,925 | 17,792 | 50,657 | 49,650 | 138,848 |

* Information in Table 1 was obtained from estimates provided by Stardust Development (April, 2003). Population and wastewater flow projections were also included in the October, 2002 MAG 208 report for the Town of Buckeye (Table 2); however, the total wastewater flow projected in the year 2020 for the Town of Buckeye was 8.24 MGD. The population projections provided by Stardust Development for the Tartesso WRF service area alone may be as high as 18 MGD in the year 2022 (not including significant flows expected for the Sundance WRF, Town of Buckeye WWTP, Verrado WRF, etc.).

Table 2. Projected Population and Wastewater Generation within the Town of Buckeye (Source: October, 2002 MAG 208 Water Quality Management Report)

| Table 4.13 Buckeye Population and Flow Projections MAG 208 Water Quality Management Plan Update | | | | | | |
|--|---------------------------------------|---------------|--------------------------|---------------|---------------------|--------------------------------------|
| Year | Core Planning Area (RAZ 278 & 279) | | Future Planning Areas | | Total Population | Total Wastewater Flow (mgd) |
| | Population | Flow (mgd) | Population | Flow (mgd) | | |
| 2000 | 10,279 | 1.03 | 7,773 | 0.78 | 18,084 | 1.81 |
| 2005 | 12,252 | 1.23 | 10,101 | 1.01 | 22,385 | 2.24 |
| 2010 | 14,630 | 1.46 | 13,514 | 1.35 | 28,176 | 2.82 |
| 2015 | 24,914 | 2.49 | 26,500 | 2.65 | 51,446 | 5.14 |
| 2020 | 36,356 | 3.64 | 46,028 | 4.60 | 82,416 | 8.24 |
| Based on 100 gpcd. | | | | | | |

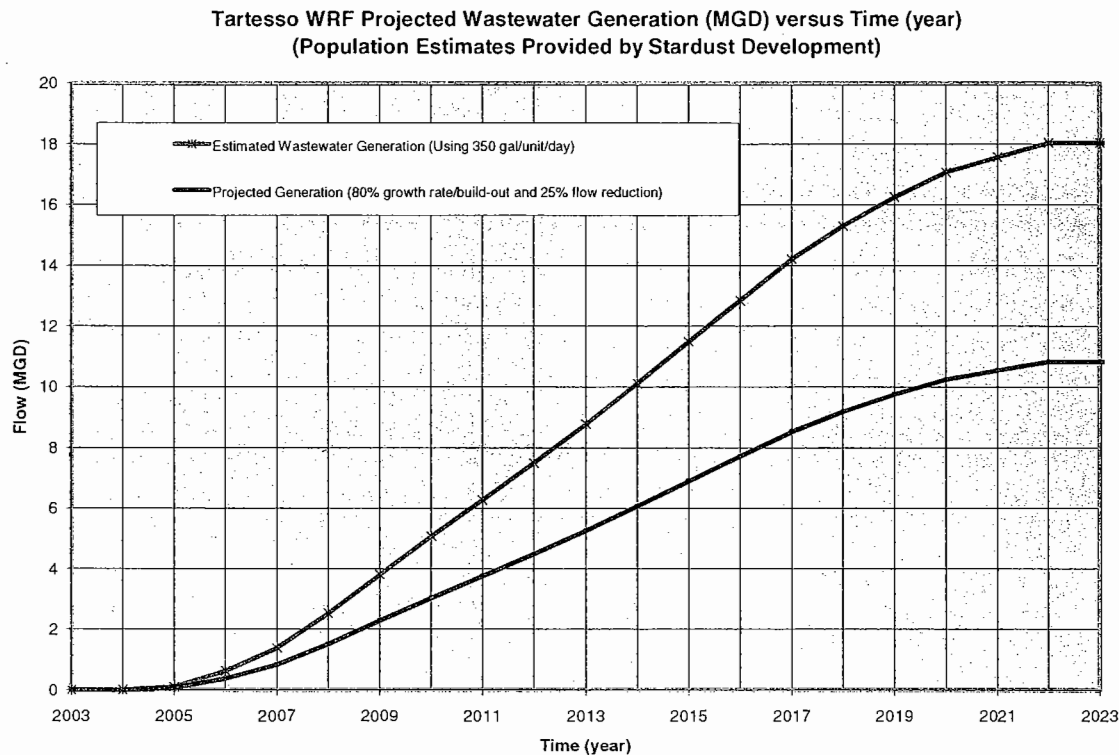
The Stardust information was assumed to be more accurate than previous population projection estimates included in the October, 2002 MAG 208 Water Quality Management Report as several new developments within the Town of Buckeye were not included in the MAG report. Specifically, the October, 2002 MAG report states on page 4-50: “Developments are emerging outside the core planning area, in the perimeter planning areas of Buckeye, like Festival Ranch, Sun Valley, Sun Valley South, **Tartesso, and Tartesso North**. Planning for development of a sewer service area in the perimeter planning areas remains in the preliminary stages. The very preliminary nature of these plans make it difficult to include these potential facilities in the 208 Plan.” Thus, the Stardust Development Corporation population estimates were used to calculate wastewater generation for the proposed Tartesso WRF.

The water supply to serve the proposed Tartesso development is anticipated to be primarily groundwater. Two reports were conducted in 2003 regarding the water supply which demonstrated that the underlying aquifer is sufficient to service the full build-out Tartesso Development:

- The Hydrogeologic Investigation for Tartesso, Maricopa County, AZ (submitted to the Arizona Department of Water Resources (ADWR) 4/23/03 by Southwest Groundwater Consultants, Inc.)
- The Water and Wastewater Master Plan: Tartesso West Community Master Plan (submitted 4/17/03 by Dave Evans and Associates)

Presented in Figure 3 are wastewater generation estimates versus time for the proposed Tartesso WRF. Included in the figure are maximum expected wastewater flows assuming 100% build-out and unit flow generation of 350 gallons/unit/day for all size residences (shown in blue). Using this conservative estimate of wastewater projection, 100% build-out is assumed to occur in 2022 at 18 MGD average day flow. Based on historic build-out percentages of similar developments, the Tartesso and other developments within the service area are expected to only achieve approximately 80% build-out (rates of growth are also expected to be slower than anticipated). In addition, despite taking into consideration commercial, educational, and mixed use flows by the unit wastewater generation quantity of 350 gallons/unit/day, measured unit wastewater generation in new developments in the Buckeye area have shown flows to be considerably less than 350 gallons/unit/day according to Stardust Development Corporation. Therefore, also shown in Figure 3 (in red) is projected wastewater generation from the Tartesso WRF service area for 80% of the expected growth rate and build-out with an additional 25% reduction in flow due to previously measured quantities. Using this anticipated wastewater projection the estimated average day wastewater flow is approximately 11.0 MGD in year 2022.

Figure 3. Projected Wastewater Generation versus Time for the Tartesso WRF



3. Water Reclamation Facility Description

Consistent with treating wastewater flows to ADEQ Title 18 Class A+ effluent standards, the Tartesso WRF design will implement multi-stage, redundant treatment mechanisms consisting of physical and biological means. The facility will be equipped with advanced control systems to allow for enhanced operational capabilities and alarming. Back-up power and manual override systems are also incorporated into the design for emergency scenarios.

A treatment schematic for the Phase I Tartesso WRF is included in Appendix B. The design is an activated sludge process within hybrid sequencing batch reactors (SBRs) for secondary removal of organics and nutrients. The SBRs will be completely enclosed and implemented with noise and odor control features. As typical with conventional SBRs, the treatment process will utilize anoxic mixing, aerobic mixing, and static reaction capabilities to provide biological oxidation, nitrification, denitrification, phosphorous removal, and clarification within each reactor tank. The hybrid SBR design includes an additional anoxic pre-reactor which functions for flow equalization, denitrification, and biological selection which provides for optimal treatment efficiency and ease of operation. The hybrid mechanism also allows for efficient foam and scum removal from the SBR during return activated sludge (RAS) periods. Preceding primary treatment within the facility will include screening and grit removal within covered and odor-controlled headworks areas. Following the secondary processes, the facility will be equipped with tertiary treatment capabilities including a surge basin, filtration, and UV

disinfection equipment (with back-up chlorination). To provide process redundancy and obtain a Phase I average-day capacity of 1.2 MGD, four reactor tanks (two SBR reactors and two pre-reactors) will be constructed in Phase I.

Wastewater will be treated to exceed the current ADEQ Title 18 requirements for unrestricted irrigation recharge or re-use. The phase I plan for effluent includes discharging from the Tartesso WRF to adjacent recharge basins directly east of the facility for groundwater recharge. Ultimately, future golf courses and public parks may be irrigated with reclaimed water from the facility. Stardust Development may provide reclaimed water at less cost than potable groundwater or surface water supplies. Effluent proposed for future reuse from the treatment facility may be stored in lined golf course lakes and water feature amenities prior to distribution for irrigation.

The Tartesso WRF will generate waste sludge which will be directed to an aerated digester reactor for biological conversion including volumetric sludge reduction, pathogen removal, and bio-solids conditioning. The sludge digestion process will ultimately provide pathogen and vector attraction reduction equivalent to the EPA Title 40 CFR 503 regulations for Class B biosolids. Biosolids will be dewatered, stored, and hauled to either a landfill for disposal or biosolids reuse areas.

a.) Facility Capacity

The Tartesso facility will have an average day capacity for Phase I of 1.2 MGD with phased expansions which will treat potentially 18 MGD (average day capacity) at full build-out. The phasing of the facility will be dependent on population and development growth rates from the service area (see Table 3). The modular design of the facility typical of SBRs will allow efficient implementation of subsequent phases to the Tartesso WRF. Both the Phase I and subsequent phases will be capable of processing peak day and peak hour flows into the facility.

Table 3. Potential Phasing Options for the Tartesso WRF Based on Projected Wastewater Generation from the Service Area

| Potential Phasing Options Based on Wastewater Generation | | | | | | |
|---|---------------------------|----------------------------|-----------------------------|--------------------------------|--------------------------------|---------------------|
| | Phase I (year) | Phase II (year) | Phase III (year) | Phase IV (year) | Phase V (year) | TOTAL |
| 100% Build Out 350 gal/unit/day | 1.2 MGD (2004) | 5.4 MGD (2006) | 9.6 MGD (2010) | 13.8 MGD (2012) | 18.0 MGD (2015) | 18.0 MGD |
| 80% Build Out & Growth Rate w/25% Flow Reduction | 1.2 MGD (2004) | 5.2 MGD (2007) | 9.2 MGD (2012) | 11.2 MGD (2015) | - | 11.2 MGD |

b.) Site Description

The proposed location of the Tartesso WRF is in the Southeast $\frac{1}{4}$ of the Southwest $\frac{1}{4}$ of Section 35 in Township 2N, Range 5W in the Town of Buckeye, AZ. The proposed site is undeveloped, uninhabited desert. The site slopes generally to the south at an approximate slope of 0.008. Directly east of the site is a narrow drainage wash with slopes of approximately 0.03 in the south direction. The closest paved road to the site at the time of the report is Salome Highway, which runs northwest/southeast approximately 1 mile north of the proposed Tartesso WRF. Besides the Town of Buckeye, within a three-mile radius of the proposed facility is unincorporated land within Maricopa County (northwest of the facility) and Arizona State Land as shown in Appendix A. A support letter from Maricopa County and the Town of Buckeye are included at the beginning of this report.

c) Wastewater Reclamation Requirements

Treated effluent from the Tartesso WRF will be reclaimed for groundwater recharge and potentially storage and recovery via an ADWR permit. In addition, an AZPDES may be sought to allow an alternate discharge point of effluent to a water of the US such as the Hasayama River and/or its associated tributaries. Also, potentially direct reuse for irrigation or lake source-water may be provided following further development. The treated effluent is expected to be of very high water quality, and will exceed ADEQ's Title 18 reclaimed water quality criteria for the irrigation of wastewater where public access is not restricted. Effluent from the Tartesso WRF will comply with ADEQ Title 18, Chapter 11 requirements for Class A+ reclaimed water including the following requirements:

1. Wastewater must undergo treatment via the following mechanisms:

- Secondary treatment, filtration, nitrogen removal, and disinfection
- Chemical feed capabilities are mandatory to allow coagulation prior to filtration and disinfection to ensure low turbidity (see below)

2. Effluent water quality must conform with the following:

- Turbidity < 2 NTU (24 hour mean)
- Turbidity < 5 NTU (any time)
- Fecal Coliform = none detected (4 of 7 samples)
- Fecal Coliform < 23 CFU/100mL (any time)
- Total Nitrogen < 10 mg/L (5 day mean)

Reclaimed wastewater for recharge will be required to meet the aquifer water quality standards established by ADEQ. The water quality will meet or exceed all

local, state and federal requirements mandated by APP permits provided ADEQ Title 18 Class A+ effluent quality is achieved. As necessary, the reclaimed water will also meet potential ADWR Storage and Recovery, reuse, and/or AZPDES permits sought for the project assuming effluent is ADEQ Class A+.

d) Stormwater Discharges

The Tartesso WRF will be designed to contain all stormwater runoff onsite. Thus, after completion of construction, the facility is not anticipated to produce stormwater discharges. During construction, the EPA and ADEQ will permit any stormwater discharges to Waters of the United States under the National Pollutant Discharge Elimination System (NPDES) program.

4.) Existing Sanitary Districts, Private Utilities, and WRF Service Areas

No other existing treatment facilities, sanitary districts, or certified service areas will be impacted by commissioning of the Tartesso WRF. Based on the proposed location of the Tartesso WRF (Southeast ¼ of the Southwest ¼ of Section 35 in Township 2N, Range 5W in the Town of Buckeye, AZ), Maricopa County and Arizona State Land are within a three-mile radius of the proposed facility as shown in Appendix A.

5.) Effluent Recharge Facility

The primary location for effluent discharge from the Phase I Tartesso WRF and potentially future phases is a groundwater recharge facility preliminarily located immediately northwest of the treatment facility. Southwest Groundwater Consultants, Inc. (SGC) conducted a study of the proposed recharge area in a 2003 ADEQ Aquifer Protection Permit Pre-Application Report. In the study SGC conducted an infiltration analysis and vadose zone characterization. In particular, 30 single-ring cylinder infiltration tests were performed over a 160 acre area, five deep boreholes (160 - 200 feet below ground surface (bgs)) were drilled and analyzed, and 10 shallow boreholes (20 feet bgs) were drilled and analyzed.

Results from the 160 acre infiltration testing resulted in average infiltration capacity of 1.24 ft/day within the eastern portion of the property and 3.71 within the western portion of the property (closer to the Hassayampa River). Assuming 25% of the 160 acres (40 acres) are actually utilized at one time for recharge due to roads, basin boundaries, and maintenance of basins, the 160 acre proposed region has a total calculated recharge capacity of 20.1 MGD according to SGC. Soil borings demonstrated predominantly fine to coarse sand with varying amounts of gravel, interbedded with lenses of silty sand in most locations.

Appendix G provides information from the proposed recharge area analysis performed by SGC (ADEQ Pre-Application Meeting Report).

D. Permitting Requirements

The Tartesso WRF will require the following permits and clearances:

- Aquifer Protection Permit (APP) issued by the Arizona Department of Environmental Quality (ADEQ) for reclaimed water and sludge disposal
- Maricopa County Environmental Services Division (MCESD) Non-title V Air Quality Permit
- MCESD Approval to Construct (ATC) and Approval of Construction (AOC)
- MCESD Annual Operations Permit
- Right-of-way easement from the Arizona State Land Department
- Archeological and Native Plants clearances through the Arizona State Land Department, and an Environmental Assessment – Phase I clearance

And Potentially:

- Underground Storage Facility and Recovery Permit by the Arizona Department of Water Resources (ADWR)
- ADEQ Reclaimed Wastewater Reuse Permit
- EPA/ADEQ NPDES Permit
- ACOE Clean Water Act (CWA) 404 Permit

E. Pretreatment Requirements

The Code of Federal Regulations Part 403 Section 403.8 states, “any POTW with a total design flow of 5 million gallons per day and receiving from industrial users pollutants which pass through or interfere with the operation of the POTW or are otherwise subject to pretreatment standards, will be required to establish a pretreatment program.” No industrial users are anticipated to discharge into the proposed Tartesso WRF. Thus, the facility is not required to comply with pretreatment requirements. If industrial users are added to the service area of the facility, a pretreatment program will be developed with the industrial user being subject to pretreatment standards as regulated by the EPA.

F. Sludge Management Requirements

The Tartesso WRF will be subject to biosolids regulations as promulgated in EPA 40 CFR 503. Sewage sludge, which is produced by the facility, is defined in 40 CFR 501 as any solid, semi-solid, or liquid residue removed during the treatment of municipal wastewater or domestic sewage. Sewage sludge includes, but is not limited to, solids removed during primary, secondary, or wastewater treatment, scum, septage, portable toilet pumpings, Type III Marine Sanitation device pumpings, and sewage sludge products. Sewage sludge does not include grit, screening, or ash generated during the incineration sewage. The 40 CFR 503 regulatory requirements include standards for the use and disposal of sludge and consist of general requirements, pollutant limits, management practices and operational standards for the final use or disposal of sewage sludge generated during the treatment of domestic sewage. It also includes pathogen and vector attraction reduction requirements for sewage sludge applied to land or placed in a surface disposal site.

The proposed Tartesso WRF will meet the 40 CFR Part 32 requirements for classification of sewage sludge as Class B Biosolids for Phase I (1.2 MGD Capacity) for wastewater flows less than 600,000 gallons/day. Additional flows to the Phase I facility beyond 600,000 gallons/day reduce the mean cell residence time below the criteria established for Class B and thereby sludge will not meet the Class B standard for biosolids for the remainder of Phase I. Following completion of Phase II of the Tartesso WRF, all sewage sludge produced at the facility will conform with the Class B biosolids standard for time and temperature (40 days retention time at 20 degrees C). By meeting the EPA requirements for sludge re-use, the biosolids produced at the facility will be available for use for restricted land application or fertilization of non-contact crops.

II. Construction

A. Construction and Operation Responsibility

Stardust Development Corporation has selected Pacific Environmental Resources Corp, Inc. (PERC) to design/build/operate Phase I of the Tartesso WRF. Construction of Phase I is anticipated to be completed by approximately November, 2004 assuming facility construction is commenced by November, 2003 (the permitting phase of the project is anticipated to take approximately 6 months; construction will initiate thereafter). A draft construction schedule for the facility is included in **Appendix C**. Near the end of Phase I construction, the facility will be able to accept flows for vault-and-haul operation to the influent lift station up to 20,000 gallons per day (<70 housing units) consistent with the facility start-up plan. Hauling will be provided to another PERC, Inc. operated facility. Following Phase I Approval of Construction by MCESD, the facility will accept wastewater flows into the main facility provided adequate loadings are available for low-flow processing. As average day flows exceed 70% of the facility's capacity (e.g. 840,000 gpd in Phase I), design of subsequent phases will be initiated, followed by construction as necessary.

Following completion of each phase of construction, ownership and responsibility to operate the completed phases will be transferred to the Town of Buckeye. The Town of Buckeye will thereby be responsible for oversight of operation and maintenance of the facility. Financially, however, Stardust Development will incur the cost differential (i.e. shortfall) between wastewater revenues and costs associated with operating and maintaining the facility. The Town of Buckeye will retain PERC, Inc. for operation of the facility for a minimum of five years. The draft development agreement in Appendix D contains information regarding service, and operation and maintenance financing of the facility in Section 11.

B. Sources of Pollution

The construction of the wastewater treatment plant will not be a significant source of pollution. Anticipated pollution from construction activities include fugitive dust, construction equipment exhaust emissions, and construction related solid waste. Erosion control measures during construction and grading will be implemented to prevent potential storm water runoff to water bodies. The developer and project contractor shall comply with local regulatory requirements and provisions of construction permits issued.

III. Financing and Other Actions to Implement Plan

A. Financing Plan

Stardust Development Corporation has made financial plans for the construction and operation of the proposed Tartesso WRF. The new facility will be constructed using private, tax exempt, and or developer/development funds.

B. Financing Capability to Construct the Facility

Stardust Development Corporation has the financial capacity to construct and operate the Tartesso WRF. A letter from Stardust Development stating financial assurance is included in Appendix E.

IV. Impacts and Implementation Plan

A. Implementation Plan

The implementation of construction and operation of the wastewater treatment plant will be planned and executed by the Stardust Development Corporation. Stardust Development has hired PERC, Inc. to design/build/operate the Tartesso Wastewater Treatment Plant. PERC, Inc. is a licensed contractor in the state of Arizona (AZ # 150360). The PERC, Inc. design/build/operate team includes Arizona licensed engineers and certified wastewater facility operators. Design completion for Phase I is anticipated to be completed by approximately August, 2003. A draft schedule of construction for Phase I is provided in Appendix C.

B. Impacts of the Proposed Wastewater Treatment Plant

The construction and operation of the Tartesso WRF is not expected to adversely impact any neighboring municipality, sanitary district, certificated area, community or business. The Tartesso WRF will provide sewage treatment services for a 13,500 acre area within the Town of Buckeye which will encourage residential and business growth.

Potential environmental issues include odor, noise, vectors and hazardous materials. The following briefly discuss and addresses these issues.

Odors: The plant will include odor-scrubbing systems for process equipment, tankage, and sludge processing areas. All process tanks are covered to maintain negative pressure on the odor-control system. All headworks and sludge processing equipment is housed inside buildings. In addition, wastewater and sludge in the Tartesso WRF is aerobically treated which reduces ammonia, sulfide, and other odorous reduced compounds.

Noise: All process equipment will be enclosed in insulated masonry buildings. Additionally, the aeration blowers will be provided with critical silencers and housed in sound attenuation enclosures. All pumps and aerators will be submersible type and will not produce noise.

Vectors: The treatment facilities will be properly operated and maintained to reduce vector attraction. Headworks equipment and sludge processing facilities will be covered and enclosed in building structures.

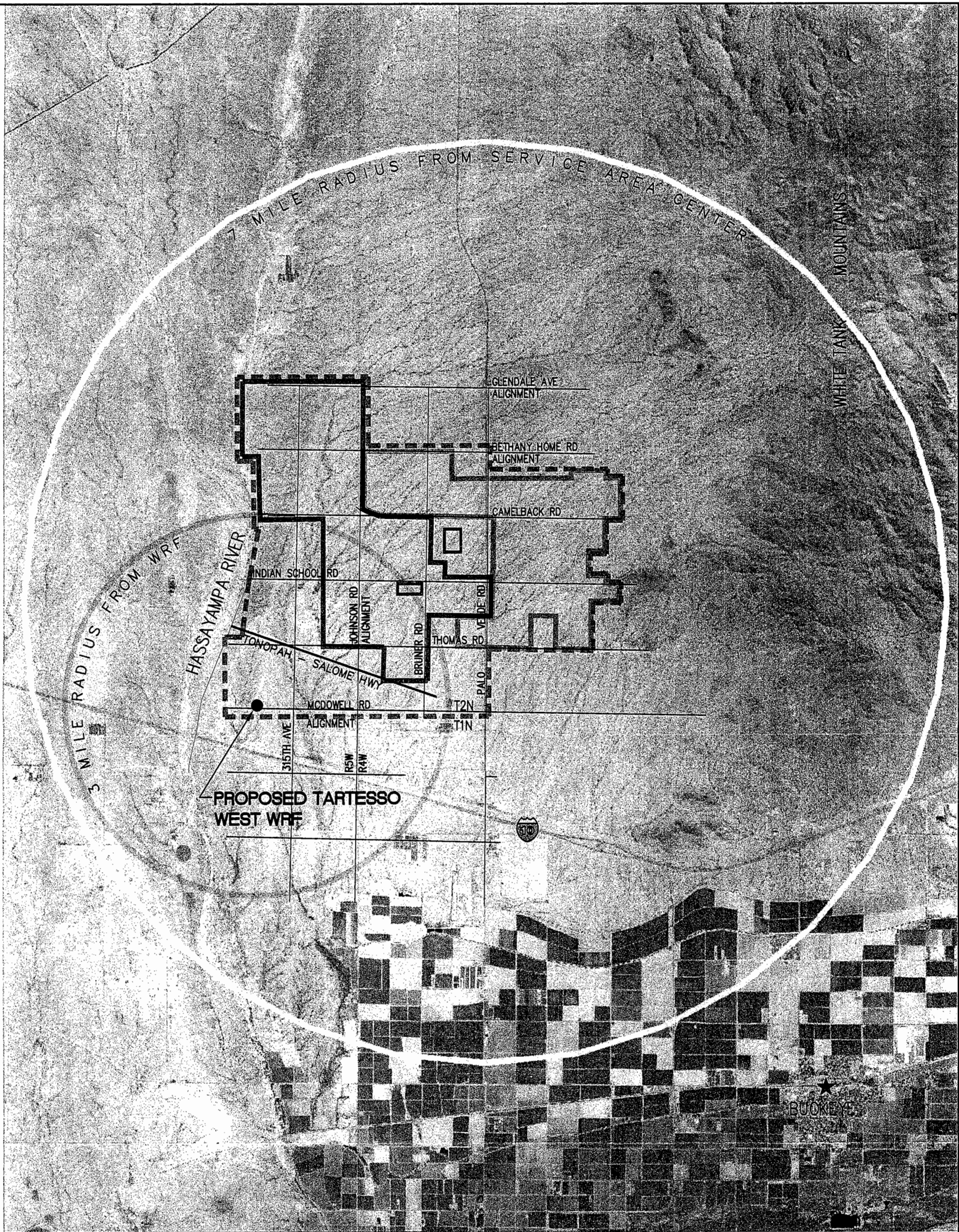
Hazardous Materials: The wastewater treatment facility will not accept any hazardous materials. Only municipal sewage from the Stardust Development service area will be accepted. An emergency plan will be developed to isolate and contain any hazardous materials discovered. The proposed treatment system does not require the use of any hazardous materials beyond the storage of tablet chlorine for back-up disinfection capability, activated carbon contained within the odor control system, and diesel fuel for the back-up power generator. A current set of Material Safety Data Sheets (MSDS) will be maintained for all chemicals, polymers, and bio-augmentation products used at the facility.

V. Public Participation

As part of the MAG Water Quality Management Plan Amendment Process, the Maricopa Association of Governments (MAG) with cooperation of the Town of Buckeye is responsible for ensuring that the following actions are implemented after submittal of the draft 208 Amendment:

- Notify all parties of a public hearing on the 208 Amendment by sending notices to interested parties at least 30 days prior to the public hearing. The notice may include the date, time, subject and location of the public hearing for the 208 Amendment.
- Notify public at least 45 days in advance of the public hearing by advertising in a publication. The notice should include the date, time, subject and location of the public hearing for the 208 Amendment.
- Notify public that draft amendments are available for public viewing 30 days before the hearing. This may include the location, days, and time of availability.
- Submittal of an affidavit of publication of the public notice.
- Submittal of a responsiveness summary for the public hearing.

Appendix A



LEGEND

- TARTESSO WEST WRF SERVICE AREA
- TARTESSO WEST DEVELOPMENT
- TARTESSO NORTH DEVELOPMENT
- WASTEWATER RECLAMATION FACILITY



01

EXHIBIT

PACE
PACIFIC ADVANCED
CIVIL ENGINEERING
17520 NEWHOPE STREET, SUITE 200
FOUNTAIN VALLEY, CA 92708
PH (714) 481-7300 FAX (714) 481-7299

SCALE 1"=8000'
DESIGNED A.K./D.D.T.
DRAWN N.V.K.
CHECKED J.A.M.
DATE 04/07/03
JOB NO. 7713-E

JOB

PROPOSED
TARTESSO WEST WRF

BUCKEYE

ARIZONA

TITLE

SERVICE AREA
& SITE MAP

Appendix B

Basis of Design and Unit Process Capacity Information

Tartesso WRF Phase I

Design Flows

| | |
|------------------------------|-----|
| Maximum Month Day Flow (MGD) | 1.2 |
| Peak Day Flow (MGD) | 2.4 |
| Peak Hour Flow (MGD) | 3.6 |

Influent Parameters

| | |
|-------------|-----|
| BOD5 (mg/l) | 300 |
| TSS (mg/l) | 300 |
| TKN (mg/l) | 40 |

Effluent Parameters

| | |
|------------------------------|---|
| BOD5 (mg/l) | <5 |
| TSS (mg/l) | <5 |
| TN (mg/l) | <5 |
| Turbidity (NTU) | <2 |
| Coliform (fecal) (FCU/100ml) | Non-detected in 4 of 7 samples <23 single sample maximum |

Influent Lift Station

| | |
|---|------------|
| Length (feet) | 28.5 |
| Width (feet) | 18.5 |
| Area (ft ²) | 527 |
| Maximum Liquid Depth (feet) | 11.25 |
| Minimum Liquid Depth (feet) | 3.0 |
| Working Volume (gallons) | 32,537 |
| Pumping Capacity w/ largest Unit Out of Service (GPM / MGD) | 2500 / 3.6 |
| Pump #1 Capacity (Flygt 3170 - 25 HP) | 2500 / 3.6 |
| Pump #2 Capacity (Flygt 3170 - 25 HP) | 2500 / 3.6 |

Headworks

| | |
|-----------------------------------|------------|
| Screen/ Grit Capacity (GPM / MGD) | 2500 / 3.6 |
|-----------------------------------|------------|

Basis of Design and Unit Process Capacity Information

Anoxic Reactors

| | |
|--|---------|
| Number of Reactors | 2 |
| Length (feet) | 28.5 |
| Width (feet) | 38.5 |
| Normal High Liquid Depth (feet) | 18.6 |
| Minimum Liquid Depth Based on MMDF (feet) | 11.7 |
| Total Area of Anoxic Reactors (ft ²) | 2194.5 |
| Average Volume (gallons) | 248,685 |
| Average Hydraulic Retention Time (Hours) | 5.0 |
| Maximum Liquid Depth (feet) | 23 |
| Surge Volume (Including 1 Batch) (gallons) | 214,646 |
| Minutes of Surge Storage @ Peak Hour Flow | 86 |

| | |
|------------------|--------------------|
| Mixing Type | Direct Drive Mixer |
| Number of Mixers | 2 |
| Mixing HP | 4 HP |

SBR Fill Pumps

| | |
|---|-------|
| Number of Fill Pumps | 2 |
| Minimum Capacity of Fill Pump Ea. (GPM) | 3970 |
| Fill Pump HP | 25 HP |

SBR Reactors

| | |
|--|---------|
| Type of Treatment | SBR |
| Number of Reactors | 2 |
| Length (feet) | 78.5 |
| Width (feet) | 38.5 |
| Maximum Liquid Depth (feet) | 23 |
| Working Volume / Reactor (gallons) | 519,948 |
| Average Hydraulic Retention Time (Hours) | 20.8 |
| Total HRT for Anoxic + SBRs | 25.8 |
| Decant Depth (feet) | 6.3 |
| Decant Volume / cycle (gallons) | 142,421 |
| Decant Rate (GPM) | 3,520 |
| Design MLSS (mg/l) | 3,500 |
| Design SRT (days) | 12.7 |

Basis of Design and Unit Process Capacity Information

Cycle Times (min) at Average Day Flow

| | |
|--|-----------|
| Fill | 36 |
| Interact / React | 171 |
| Settle | 45 |
| Decant | 41 |
| Idle | 49 |
| Total Time Per Cycle | 342 |
| Number of Cycles / Day / Reactor | 4.2 |
| Total Available Aeration Time per Cycle (Min / Hrs) | 205 / 3.4 |
| Total Available Aeration Time per Day per Tank (Hrs) | 14.4 |

Aeration and Mixing Systems

| | |
|---|-----------------------|
| Mixing Type | Jet Aeration Manifold |
| Design Oxygen Transfer Efficiency | 0.25 |
| Total Available Aeration Time per Day (Hrs) | 14.4 |
| Design Aeration Time per Day (Hrs) | 10.9 |
| Design CFM per Basin | 1,000 |
| Number of Jet Aeration Manifolds / Reactor | 2 |
| Number of Jets Nozzles per Manifold | 10 |
| Total Number of Jets Nozzles per Basin | 20 |
| Design CFM per Jet Aeration Nozzle | 50.0 |
| HP per Jet Mixer | 25 HP |
| Total Number of Blowers | 3 |
| Aeration Required per Blower (SCFM) | 1000 @ 10.4 PSI |
| Blower HP | 75 |

Decant Surge Tank

| | |
|---|---------|
| Length (feet) | 18.5 |
| Width (feet) | 58.5 |
| Max Liquid Depth (feet) | 15.2 |
| Minimum Liquid Depth (feet) | 0.0 |
| Working Surge Volume (gallons) | 123,047 |
| Number of Filter Feed Pumps | 3 |
| Capacity of Each Filter Feed Pump (GPM) | 1135 |

Basis of Design and Unit Process Capacity Information

Effluent Filtration System

| | |
|---|--------------|
| Filter Type | Aquadisk - 4 |
| Filter Media Type | Woven Fabric |
| Number of Units | 2 |
| Filtration Area per Filter Unit (SF) | 215 |
| Filtration Capacity at 3.9 GPM /SF (1 Filter out of service) | 833 |
| Filtration Capacity at 7.8 GPM / SF (1 Filter out of service) | 1666 |
| Backwash Flow Rate (GPM) | 130 |
| Backwash as % Through Put | 0.75% |
| MMDF Backwash Volume / Day (gallons) | 9,000 |

UV Disinfection System

| | |
|--|-------|
| UV Type | LPHO |
| Number of Modules | 4 |
| Capacity / Module @ 100 mJ/cm ² & 65% Transmittance (GPM) | 555 |
| Number of Lamps / Module | 40 |
| KW Rating of Lamp | 0.165 |
| Total KW Installed | 26.4 |
| Average KW During Operation @ MMDF | 9.9 |
| % of Total Capacity @ MMDF | 37.5 |

Sludge Production

| | |
|--|--------|
| Design Sludge Yield Factor | 0.80 |
| Lbs of Dry Solids / Day from Secondary Treatment | 2,402 |
| Volume of WAS per Day @ 8333 MLSS (gallons) | 34,561 |

Clear Well / Effluent Pump Station

| | |
|---------------------------------------|--------|
| Length (feet) | 18.5 |
| Width (feet) | 18.5 |
| Max Liquid Depth (feet) | 19.5 |
| Volume (gallons) | 49,921 |
| Capacity of Each Discharge Pump (GPM) | 2500 |

Sludge Digestion

| | |
|--|------|
| % Volatile Solids | 80 |
| % Reduction of Volatile Solids after Digestion | 30 |
| Lbs of Solids after Digestion | 1825 |

Basis of Design and Unit Process Capacity Information

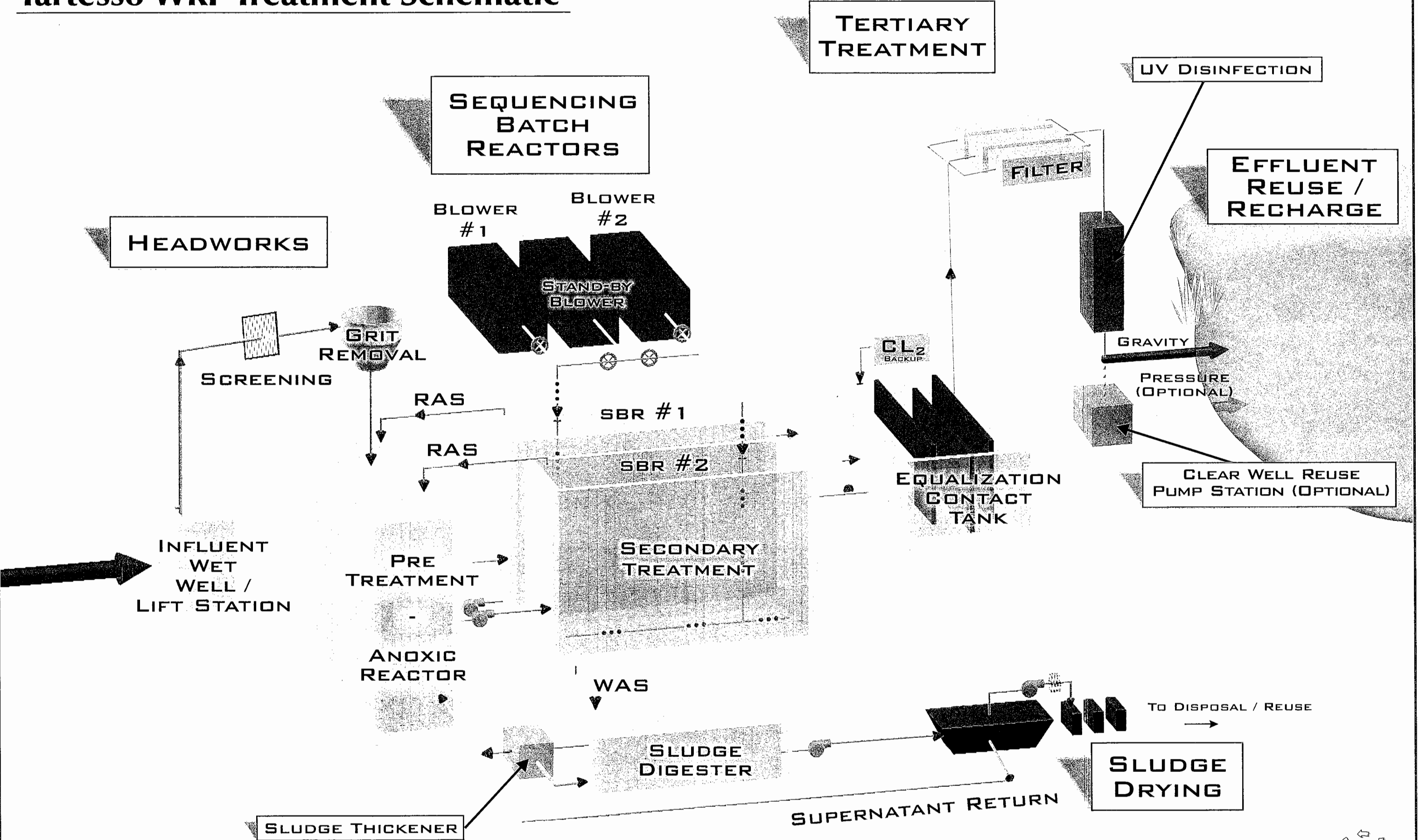
Sludge Dewatering

| | |
|---|----------------------|
| Type | Decanting Centrifuge |
| Number of Units | 1 |
| Ave. Loading Capacity of Centrifuge (GPM) | 86 |
| Gal of Sludge to Centrifuge per Day @2% | 10,944 |
| Design % Solids in Feed | 2.0 |
| Design % Solids in Cake | 20 |
| Total Hours of Operation / Day | 2.1 |
| Total Volume of Sludge to Disposal (cy/day) | 5.4 |

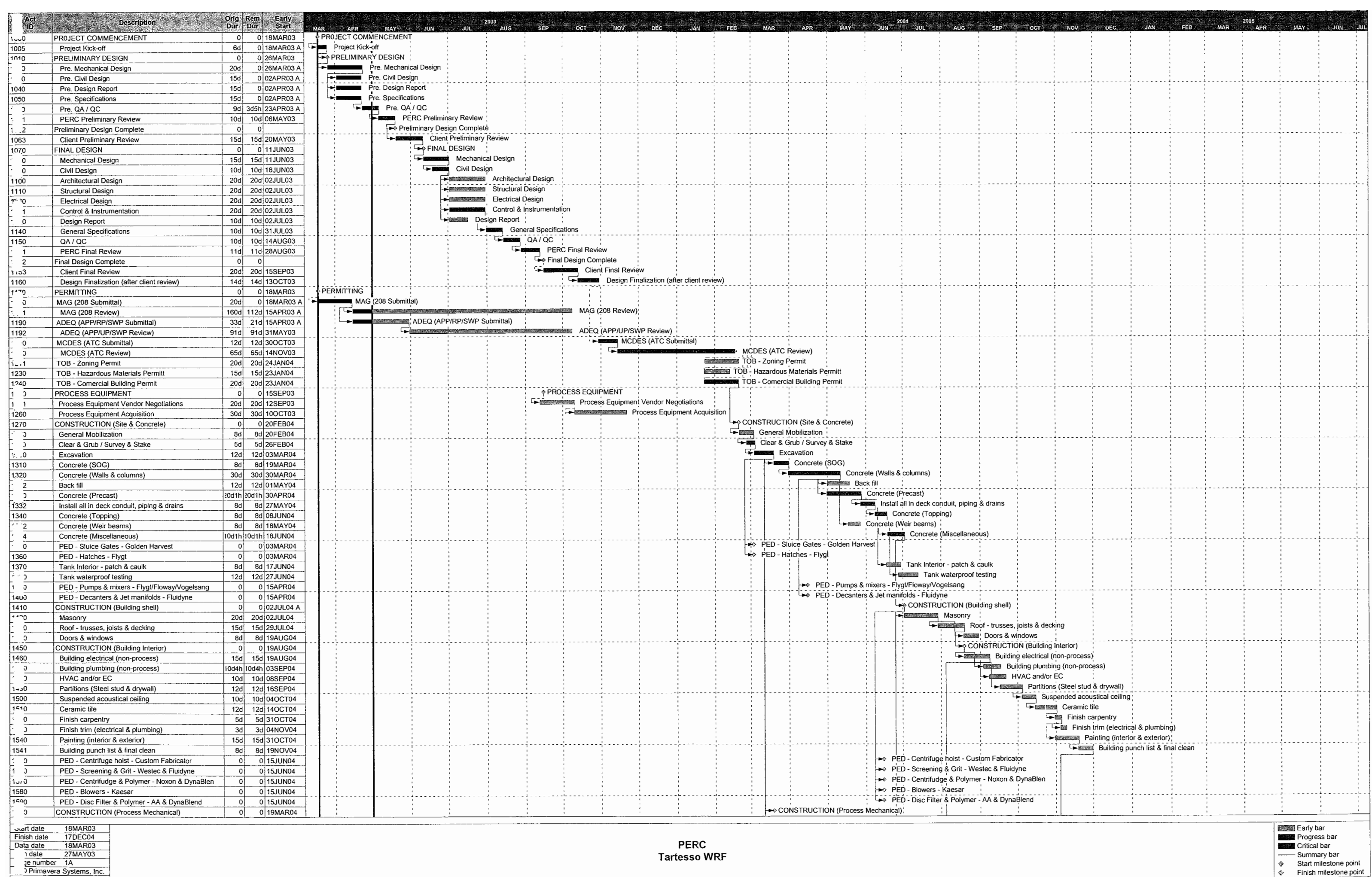
Polymer Requirements

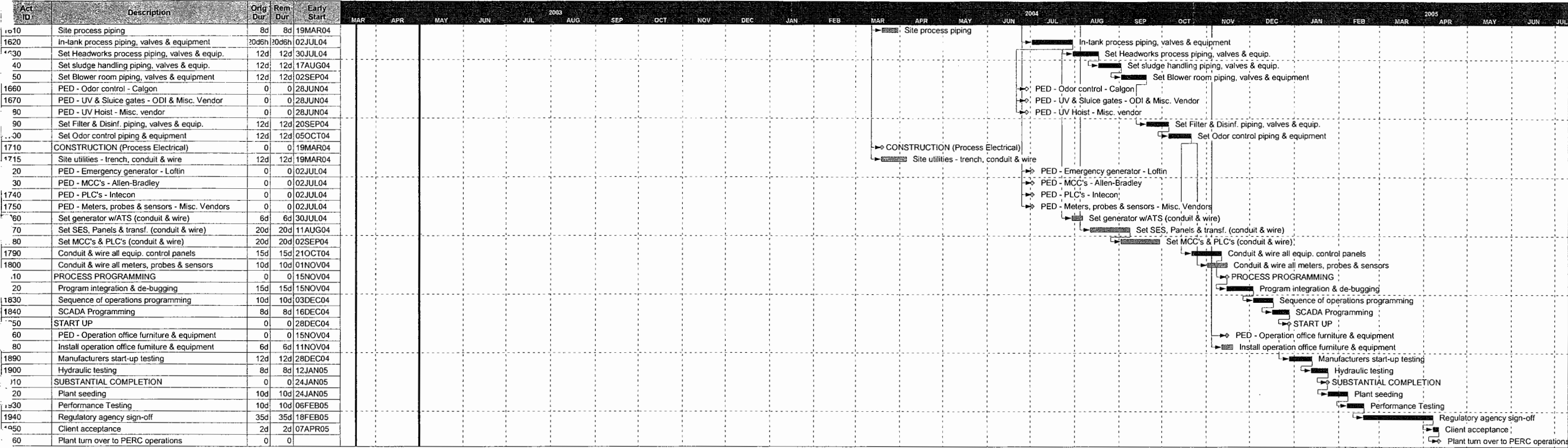
| | |
|--|-----|
| Design Polymer Requirements (lbs Polymer / Ton Dry Solids) | 10 |
| Estimated Polymer Usage per Day (Lbs) | 9.1 |
| Gallon of Neat Emulsion Polymer Required / Day | 3.1 |
| Gallon of Dilution Water / Day | 626 |

Tartesso WRF Treatment Schematic



Appendix C





| | |
|---------------------------|---------|
| Start date | 18MAR03 |
| Finish date | 17DEC04 |
| Data date | 18MAR03 |
| Run date | 27MAY03 |
| Page number | 2A |
| © Primavera Systems, Inc. | |

PERC
Tartesso WRF

- Early bar
- Progress bar
- Critical bar
- Summary bar
- Start milestone point
- Finish milestone point

Appendix D

When Recorded, Return to:

Joseph A. Blanton, Manager
100 North Apache
Suite A
Buckeye, Arizona 85326

DRAFT

**TARTESSO WEST
DEVELOPMENT AGREEMENT**

DATED _____

BETWEEN THE TOWN OF BUCKEYE

AND

STARDUST STRUCTURED INVESTMENTS NO. 4, L.L.C.

AND

SUN VALLEY PARTNERS, L.L.C.

AND

BIF-BUCKEYE, L.L.C.

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Exhibits:

| | |
|-----------|---------------------------|
| Exhibit A | Legal Description of Land |
| Exhibit B | Depiction of Land |

DEVELOPMENT AGREEMENT

1. **Date.** The date of this Development Agreement ("Agreement") is _____, 2003.
2. **Parties.** The parties to this Agreement are:
 - (a) TOWN OF BUCKEYE, ARIZONA
Attention: Joseph A. Blanton, Manager
100 North Apache
Buckeye, Arizona 85326
Facsimile Number: 623.386.7832 ("Town")
 - (b) STARDUST STRUCTURED INVESTMENTS NO. 4, L.L.C.
SUN VALLEY PARTNERS, L.L.C.
BIF-BUCKEYE, L.L.C.
c/o Stardust Development Inc.
Attention: Chris Heeter
6730 N. Scottsdale Road, Suite 230
Scottsdale, Arizona 85253
Facsimile Number: 480-607-5801 ("Owner")

3. **Background.** The following is the background to this Agreement:

(a) Owner is the owner of approximately 5040 acres of land located in the Town, which land is more particularly described in the attached Exhibit A (the "Land") and depicted in the attached Exhibit B. Approximately 3,454 acres of this property were already zoned Planned Community.

(b) Owner desires to enable development of the Land as a phased master planned development and such phasing plan has been described in the Master Plan (as defined hereafter) and accepted by the Town.

(c) On September 3, 2002, by Resolution No. 32-02, the Town adopted amendments to the General Plan designating approximately 1,586 acres of the 5,040 acres Planned Community. On October 15, 2002, by Ordinance No. 44-02, the Town amended the Land Use District Map on these same 1,586 acres thereby establishing Planned Community zoning on the entire Land.

(d) On September 19, 2002, the Owner submitted for approval the following documents pertaining to the Land [project narrative, land use, circulation and infrastructure plans, list of permitted uses, recreational amenities and design themes, development standards and review procedures along with supporting technical studies.] which documents are intended by the Owner to collectively constitute a Community Master Plan (the "Master Plan") pursuant to Section 7-3-3 of the Town of Buckeye Development Code (the "Development Code").

(e) Town and Owner desire to enter into this Agreement pursuant to A.R.S. § 9-500.05 and the Development Code to approve the Master Plan for the Land.

(f) On _____, by Ordinance No. _____, (the "Ordinance") Town approved this Agreement and the Master Plan.

4. **Agreement.** For good and valuable consideration, including the benefits to Town and Owner as described above, Town and Owner agree as is more specifically set forth in this Agreement.

5. **Community Master Plan.**

(a) Owner has submitted and the Town has approved the Master Plan pertaining to the Land for development of the Land. The Master Plan is consistent with the Town's General Plan for the Land and the Area Plan for the Land. Master Plan contains the information required by the Laws and Regulations (as defined in this Agreement). The Master Plan shall constitute an amendment to the Area Plan to the extent the Area Plan is modified by the Master Plan. Subject to the amendments and changes to the Laws and Regulations (as defined herein) pursuant to Section 6 of this Agreement, the Master Plan shall control if there is any inconsistency between this Agreement, the General Plan, the Area Plan, the existing Development Code, and the Master Plan. This Agreement satisfies Section 7-3-3 of the Town Development Code that requires that a Master Plan be adopted with a development agreement.

(b) The types of uses, together with the densities, and intensities of such uses for each development parcel located on the Land as shown on the Master Plan are hereby established.

(c) Town shall permit and Owner shall have the right to develop the Land consistent with this Agreement and the Master Plan, subject to: (i) the submission and approval of a more detailed plan for, (1) each phase of development, if phases are contemplated and required by the Master Plan, (2) each plat, and (3) each site plan, and (ii) compliance with the Laws and Regulations. Subject to the foregoing, the right to develop the Land as provided in the Master Plan is hereby vested and shall not be changed, provided, however, the Town reserves the right to modify, terminate or otherwise change the Master Plan including the right to develop in accordance with the uses, densities, intensities and other standards established by the Master Plan, and terminate this Agreement, if material progress has not been made by the Owner in the construction of the elements of the public infrastructure required by the Master Plan (such as and primarily the elements relating to water, sewer and streets) within five (5) years or the Owner has not built or caused to be built the end product uses (such as houses, buildings, improved parks or other improved open spaces): (i) on at least thirty six percent (36%) of the Land within thirteen (13) years, (ii) on at least sixty two percent (62%) of the Land within twenty (20) years, and (iii) one hundred percent (100%) of the Land within thirty (30) years. For good cause shown, Owner may request and Town may approve extensions of such time periods. The Town shall not unreasonably withhold approvals of such extension requests. At the request of the Town Manager, Owner shall meet with Town Manager and provide the Town with annual status reports.

(d) The Land may be planned and developed in phases (individually "Phase" and collectively "Phases"). Owner shall have the right to plan and develop more than one Phase at a time, with the location, rate, timing and sequencing to be determined by Owner. Owner shall consult with the Town Manager or his authorized representative regarding phasing determinations and the potential fiscal impacts upon municipal services. The Master Plan identifies Village I (to be platted as Unit 1) as the first development phase. If the Owner's phasing plan results in adverse impacts on the Town's ability to maintain its reasonable standard of service for any municipal service, the Town may require the Owner to construct temporary or permanent facilities or provide additional temporary subsidies necessary to maintain such reasonable standard of service pursuant to the terms of any subsidy provisions contained in a Service Agreement, as defined hereinafter, for municipal services. Development of the Land is contemplated to progress in Phases that may be non-contiguous. The phasing determinations shall be subject to modification by Owner based upon changing real estate market conditions, industry factors, and/or business considerations. Any such modification shall not necessitate an amendment to this Agreement, but shall be retained in the Town's official file for the Land. Notwithstanding the modification or termination deadlines for the Master Plan set forth in paragraph (c) above, any one Phase may be developed pursuant to the Master Plan without change by the Town if the Town Manager determines that the necessary public infrastructure has been constructed and significant progress has been made regarding the development of the residential units for such phase.

(e) The Town reserves the right to require dedications of part of the Land as contemplated by the entire Master Plan for schools (in the event school sites are not required to be dedicated by the Master Plan), open space and other public purposes as part of Town's final development approvals in addition to those areas shown on the Master Plan, subject to Owner's rights under applicable United States and Arizona statutory and case law. If any governmental entity adopts a school impact fee that Owner is obligated to pay which covers the dedication of land and construction of school facilities, the imposition of that impact fee which shall supercede and render void and of no effect any reference in this section to schools.

6. **Laws and Regulations.** The Town of Buckeye Development Code as amended from time to time shall govern the development of the Land pursuant to the Master Plan. The Town must be able to regulate the planning and development of the Land and the construction and installation of improvements on the Land in order to serve the best interests of the Town. Consequently, Town reserves the right to amend existing or to adopt new laws, rules, regulations and standards of development for the Town, including resolutions, official policies and procedures and the Development Code (collectively, as amended or adopted from time to time, the "Laws and Regulations"), and subject to the provisions in Section 12 of this Agreement, the Laws and Regulations shall apply to the Land. Notwithstanding the provisions of Section 12 of this Agreement, future Laws and Regulations shall apply to the Land, regardless of the impact on the development of the Land, if such future Laws and Regulations are required or mandated by federal, state or county law or regulation; required or imposed by judicial or regulatory action, or necessary to alleviate or otherwise contain threats to public health or safety.

Any change to the Laws and Regulations as allowed in this section shall not discriminate against Owner and the Land, and any change shall be uniformly applied to all land and landowners at such time such land is within the boundaries of Town. Owner reserves its right to

object to and redress the Town as to any amendments or additions to the Laws and Regulations based upon applicable United States and Arizona statutory and case law.

7. Infrastructure.

(a) The construction and installation of the water and wastewater facilities, public streets, curbs, gutters, sidewalks and traffic control, directional signs and other public infrastructure and public facilities on the Land as required by the Master Plan and the Laws and Regulations (collectively, the "Infrastructure") shall be subject to and in compliance with the Laws and Regulations. Owner shall cause all the Infrastructure required by the Master Plan to be constructed and installed at no cost to the Town, such Infrastructure may be constructed in segments that correspond to the Phases, if any set forth in the Master Plan. In the event the Town requires infrastructure to be sized or constructed to serve and benefit other off-site property or projects, Owner shall be reimbursed through repayment agreements with other users or such other reimbursement mechanisms acceptable to the Town which the Town shall assist Owner in establishing and enforcing. All infrastructure shall be installed in a workmanlike manner in conformity with the plans and specifications that are submitted to and approved by the Town in connection with the Master Plan or each Phase.

(b) Following completion and promptly upon request of the Town, Owner, at no cost to the Town, shall dedicate any Infrastructure that is requested by Town to be dedicated to Town or any other appropriate governmental entity. Owner, at no cost to Town, shall dedicate rights-of-ways or convey public easements necessary for the construction, installation, operation and maintenance of the Infrastructure as required by Town, which rights-of-ways or easements may be located adjacent to or in other public and private rights-of-ways or easements.

(c) Owner shall give to Town a one year warranty for all Infrastructure, which warranty shall begin on the date that Town accepts the Infrastructure as provided in this section. Any material deficiencies in material or workmanship identified by Town's staff during the one-year warranty period shall be brought to the attention of Owner, who shall promptly remedy or cause to be remedied such deficiencies to the reasonable satisfaction of Town's staff. Continuing material deficiencies in a particular portion of the Infrastructure shall be sufficient grounds for Town to require (i) an extension of the warranty for a second one year period or, (ii) the proper repair of, or (iii) the removal and reinstallation of, that portion of the Infrastructure that is subject to such continuing deficiencies. Regardless of whether the one year warranty period has expired, the Owner agrees to repair any damage to the Infrastructure caused by Owner's construction activities on the Land. Nothing contained herein shall prevent the Town or Owner from seeking recourse against any other third party for damage to the Infrastructure caused by such third party.

Owner shall maintain and repair all Infrastructure comprised of streets, parkways and alleys and all appurtenances thereto at its expense, for a period of two (2) years from the date the Town accepts the Infrastructure. Such maintenance shall consist of all maintenance and repair actions reasonably required by customary engineering industry standards for each item of Infrastructure. Notwithstanding the foregoing, the Owner agrees to forever maintain all landscaping located within the public easements and rights-of-way located on the Land and such obligation shall survive the termination or expiration of this Agreement; provided, however, Owner may assign this obligation to one or more home owners associations ("HOA") provided

such HOA is legally bound to such landscaping maintenance obligation and has adequate financial ability, acceptable to the Town, to bear such obligation. Once the Town has consented to the assignment of this obligation to an HOA, Owner shall be relieved of any further obligation to maintain the landscaping.

(d) So long as such Infrastructure is constructed in accordance with the approved plans and the requirements of Section 7(a), as verified by the inspection of the completed improvements by the Town Engineer; all punch list items have been completed; and the acceptance and service agreement required by Section 11(b) (the "Service Agreement") has been executed and delivered by the Owner with respect to water, sewer, parks, police and fire facilities and any other matters set forth in the Service Agreement, the Town shall promptly thereafter accept such dedication(s) of Infrastructure, and, in the case of streets, parkways and alleys, after the expiration of the two (2) year Owner maintenance period described in paragraph 7(c) above, shall, at its own cost, maintain, repair and operate such Infrastructure, excepting areas of landscaping, in accordance with reasonable and customary municipal management and operational standards.

8. **Flood Control.** Flood control measures for the Land shall comply with the requirements of the United States Army Corp of Engineers, and the Laws and Regulations, and, to the extent they are not superceded by the United States Army Corp of Engineers or the Laws and Regulations, the requirements of the Maricopa County Flood Control District.

9. **Community Facilities District.** The Town in accordance with its adopted Community Facilities Guidelines, will consider any requests by Owner of Town to form a community facilities district comprised of the Land in order to aid in financing the cost of the Infrastructure. Nothing contained herein shall be construed to compel the Town to form a community facilities district or for the community facilities district, if formed, to finance any Infrastructure.

10. **Fees and Credits.**

(a) Promptly after the Town submits invoices to Owner, Owner shall pay Town's costs and expenses in connection with the negotiation and preparation of this Agreement.

(b) As the Land is developed, Owner shall pay to Town what are commonly referred to as development, or impact, and hookup fees (collectively, "Development Fees") that are imposed by Town as of or after the date of this Agreement, subject to offsets and credits, as allowed by law.

(c) It is the intent of the parties to allow for a credit to be given against any Development Fee imposed if the Infrastructure or land, if any, is constructed or dedicated by a party other than the Town. The owner of the credit may freely assign any credits to any person or entity developing the Land. Subject to Owner's rights under applicable United States and Arizona statutory law and case law, no credit will be given for dedication of rights-of-way, easements or other land normally required for public Infrastructure; rather a credit for land dedication is intended for dedications such as regional park sites and municipal buildings.

11. Services.

(a) The Town shall, to the extent permitted by current law, include the Land in Town's municipal service area, and, upon construction and installation of the necessary Infrastructure by Owner as provided in or as required by the Laws and Regulations or the Master Plan and with respect to water, provide the Town with an adequate source and supply of water capable of serving the Land for 100 years with potable water, the Town shall provide to the Land such utility and other services in a manner that is similar to that by which Town provides such utilities and services generally to the residents of Town, including sewer, water, garbage, fire and police. To the extent a court of final jurisdiction determines the Town shall not provide one or more municipal services to all or part of the Land, the Town shall not be liable for any damages, costs or expenses incurred or suffered by the Owner as a result of the Town's inability to serve.

(b) Notwithstanding the foregoing, if the Town determines, utilizing reasonable and customary municipal management, accounting, auditing and operational practices, that the Land or portion thereof that is being included in the Town's service area generates insufficient revenues to pay the costs and expenses of providing the water system, water treatment system, wastewater system, police and fire service or other Infrastructure, such as a regional park, to or for such area of the Land, the Owner shall pay to the Town promptly upon receipt of an invoice from the Town, the amount set forth by the Town as the operational deficit to be incurred by the Town in connection with providing municipal services to such area of the Land. The parties agree that the Owner's obligation to pay any operating deficit shall be evidenced by an acceptance and Service Agreement ("Service Agreement"). The Service Agreement shall contain provisions for the proportionate, fair and equitable periodic release of the Owner from the obligation to pay the deficit based upon the level of development activity in the area benefited by the infrastructure. In no event shall the Owner be obligated to pay any portion of the operating costs once the benefited area of the Land has reached 95% build-out. The Service Agreement shall, in addition to Owner's obligations, require the Town to assess and collect user fees or rates for each municipal service provided by the Town consisted with the fees or rates established by the Town and uniformly applied for other areas of the Town receiving similar municipal services. Failure by the Owner to promptly pay the amount owed will constitute a breach of this Agreement and the Town may collect such amounts owing by any remedy of law or equity and further may withhold the issuance of building permits for improvements on the Land until such amount is paid.

(c) Since Town does not have a current source of capital to offset the capital expenditures related to police and fire service, the Owner shall do the following in connection with the development of the Land:

i) Dedicate real property parcels of the Land (exclusive of streets and other publicly dedicated parts of the Land) for each police substation and fire station required by the Master Plan or Town when reasonably requested by the Town to serve the Land.

ii) Construct, when required by the Town, a building for each police substation and fire station reasonably required by the Master Plan or Town to serve development on the Land, or pay funds, such as development fees, to the Town sufficient to allow the Town to build such building. The building shall be of a standard design adopted by the Town to

adequately serve development on the Land. At its election and expense, Owner shall have the right to provide temporary police and fire facilities for Town until Town has issued certificates of occupancy for 600 homes (fire) and 5,000 homes (police) on that part of the Land that will be served by the facilities.

12. Restrictions. Provided the Owner has met the deadlines set forth in Section 5 (c) of this Agreement and only with respect to any development on that part of the Land for which the major components of the public Infrastructure required to be built by the Master Plan and necessary to serve such development (such major Infrastructure shall consist of water and sewer system improvements and street improvements) has been constructed or material progress has been made in the construction of such major Infrastructure, the Town shall not (i) impose a moratorium, (ii) enforce any Laws or Regulations that directly impose material limitations on the rate, timing or sequencing (other than the Town's ability to require different sequencing pursuant to Section 5(d) of this Agreement), or (iii) impose any Laws or Regulations which are for anti-growth purposes or as applied to the Land significantly and materially frustrate the density of uses contemplated by the Master Plan for such particular development. This prohibition shall not apply to the extent that a limitation may be (a) required or mandated by County, state or federal laws; (b) required or imposed by judicial or regulatory action; or (c) necessary to alleviate or otherwise contain threats to public health or safety. Notwithstanding anything contained in this Section 12, the Town reserves the right to impose a moratorium on any part of the Land for which the major Infrastructure (as described above) has not been constructed or material progress in the construction of such major Infrastructure has not been made, provided, however, the Owner shall have the right to construct such major infrastructure and cause the removal of the moratorium from the Land if the Owner constructs the Infrastructure required by Section 5(c) of this Agreement, before the end of the time period relating to construction of public infrastructure set forth in Section 5(c) of this Agreement. Unless Town imposes a moratorium as permitted in this section and subject to all Laws and Regulations, Owner shall be allowed to apply for and receive approvals from Town for development on the Land that is consistent with this Agreement and the Master Plan. Nothing in this Section 12 shall preclude the Owner from exercising its rights under applicable United States and Arizona statutory and case law to object to or redress the Town as to any such moratorium or change in Laws or Regulations.

13. Growth Boundaries. The Town, to the extent allowed by applicable law, shall use its reasonable efforts to take such action legally and reasonably available to it to include and keep the Land (for development consistent with this Agreement and the Master Plan) within any boundaries that are established by Town or that Town is required to establish by any current or future law that prohibits or limits the development of land outside of the boundaries. Owner shall reimburse Town for any legal fees and costs paid by Town in connection with any legal action to include or keep the Land within such boundaries. The Owner acknowledges and agrees that the Town has included this same language in numerous other development agreements pertaining to other land in the Town and as a result the Town may not be able to accommodate any or all of the Land within any boundaries established by the Town and, accordingly, the Town shall not be liable to the Owner for, from or against any claims, costs or damages of any kind or amount for the Town's failure to include the Land within any such boundaries.

14. **Agriculture Use.** Subject to the consequences described in Section 5 (c) of this Agreement, Owner shall have the right to use or grant rights to use the undeveloped part of the Land for agriculture purposes, including livestock grazing, until such time as development begins on that part of the Land. However, Owner shall use fences, setbacks and other physical buffers to adequately separate the agricultural uses from other uses, and Owner shall utilize agricultural practices to control dust, water runoff and other resulting conditions from the agricultural uses to ensure that such agricultural uses comply with the Laws and Regulations that apply to such agricultural uses.

15. **Covenants, Conditions and Restrictions.** Owner shall have the right to record one or more declaration of covenants, conditions and restrictions ("CC&Rs") for the area of the Master Plan and each phase to govern the private development and use of the Land. The CC&Rs shall be consistent with this Agreement and the Master Plan and all applicable Laws and Regulations, and each of the CC&Rs shall be subject to the prior review and approval of Town to confirm its compliance with this Agreement and the Master Plan.

16. **Representations and Warranties.** As of the date of the execution of this Agreement, the parties represent and warrant to each other as follows ("Representations and Warranties"):

(a) **By Owner:**

- i) Owner is the owner of the Land.
- ii) Stardust Structured Investments No. 4, L.L.C., Sun Valley Partners, L.L.C. and BIF-Buckeye, L.L.C. are limited liability companies, duly formed and in good standing in the State of Arizona.
- iii) Owner has the authority, including the persons signing for Owner, and the right to enter into this Agreement as authorized by the members of Owner at duly noticed meetings at which quorums were present.
- iv) Owner is not prohibited from executing this Agreement by any law, rule, regulation, instrument, agreement, order or judgment.
- v) Owner has not relied on any representations or warranties of Town other than those expressly set forth in this Agreement.

(b) **By Town:**

- i) The Ordinance was approved and enacted at a duly noticed and held public meeting by the Town Council, at which a quorum was present and the execution of this Agreement was authorized.

17. Cooperation.

(a) Town and Owner shall each designate a representative to act as a liaison between Town and its various departments and Owner ("Representatives"). The Representatives shall be available at all reasonable times to assist with the performance of the parties under this Agreement. The initial representative for Town ("Town Representative") shall be Joseph A. Blanton, and the initial representative for Owner ("Owner Representative") shall be Chris B. Heeter. Town Representative and Owner Representative may be changed by the applicable party by giving notice to the other party of the name, title, address and telephone number of the replacement.

(b) Town does and will from time to time, at the election of Town use the assistance of private independent attorneys, accountants, architects, engineers, inspectors and other outside professionals and consultants to assist Town in the process of administering the development of land within the boundaries of Town, including the Land. If Owner desires to have the Town retain additional outside professionals and consultants in connection with the Land, and if Town is willing to do so, Owner shall reimburse Town for all reasonable fees and costs of the professionals and consultants. Although Town shall have the right to retain and control the professionals and consultants, Town shall consider Owner's recommendation in connection with the selection of the additional professionals and consultants.

18. Conflicts of Interest. The parties acknowledge that this Agreement is subject to cancellation pursuant to Section 38-511, Arizona Revised Statutes, as amended.

19. Covenants Running with the Land. The provisions of this Agreement shall be for the benefit of, and shall be a burden upon, the Land, and the provisions of this Agreement shall be covenants running with the Land, without the necessity of an assignment of this Agreement with the conveyance of any part of the Land. However, the provisions of this Agreement shall terminate as to any Lot (as defined in this Agreement) as provided in the section of this Agreement titled "Duration."

20. Defaults and Remedies. Any party to this Agreement shall be in default under this Agreement ("Default") if it fails to pay a fixed amount of money as required under this Agreement within thirty (30) days following notice from the other party, or if it fails to satisfy any other term or provision of this Agreement within thirty (30) days following notice from the other party. If a non-monetary Default may not reasonably be cured within the thirty (30) day period, the other party shall not be in Default if it, in good faith, commences with such thirty (30) day period, and proceeds with due diligence, to fully cure the Default. In the event of a Default by Town or Owner, after the mediation process as allowed in this Agreement, the other party shall be entitled to exercise such remedies in law or equity, provided however Owner shall not be entitled to receive or collect any type or amount of consequential damages from the Town. Each part shall use good faith efforts to agree upon and participate in mediation as provided in this Agreement, if mediation is requested by either party. In addition to the remedy of specific performance against Owner, Town shall have the right to withhold the issuance of building permits for improvements on the land affected by such default until the Default is cured by Owner. Nothing contained in this section shall prevent Town from using any remedies or

imposing any fines available to it under the Laws and Regulations for a violation or breach by Owner of any Laws and Regulations.

21. Mediation.

(a) Any Default of a party or disagreement between the parties ("Disagreement") shall be subject to mediation at the election of either party. The proceeding must be held in the offices of Town. A meeting shall be held promptly between the Town Representative and the Owner Representative to attempt in good faith to negotiate a resolution of the Default or Disagreement. If within ten (10) days after such meeting the parties have not succeeded in resolving the Default or Disagreement, they shall, within ten (10) days thereafter submit the Default or Disagreement to a mutually acceptable third-party mediator who is acquainted with dispute resolution methods. The mediator shall issue a written decision within thirty (30) days after a Default or Disagreement is submitted to the mediator. The parties shall participate in good faith in the mediation and the mediation process. The mediation shall be non-binding.

(b) The obligation to mediate shall not prevent either party from exercising self-help remedies, such as setoff, or obtaining provisional remedies from a court of competent jurisdiction before, during or after the pendency of any mediation proceeding.

(c) A mediation proceeding shall not delay the implementation by any part of this Agreement that is not the subject of or affected by the mediation.

(d) The costs of mediation, including any mediator's fee, shall be borne equally by the parties. Each party's other costs and expenses shall be borne by the party incurring them. Reasonable attorney's fees may be awarded, at the discretion of the mediator, to the prevailing party (provided such a party can clearly be determined from the proceedings).

22. Duration.

(a) Unless terminated earlier pursuant to Section 5(c) of this Agreement, this Agreement shall automatically terminate as to the Land without the necessity of any notice, agreement or recording by and between the parties twenty-five (25) years after the date of this Agreement. However, unless terminated by the Town pursuant to Section 5(c) of this Agreement, if less than sixty two percent (62%) of the Land is still subject to this Agreement twenty-five (25) years after the date of this Agreement, this Agreement shall automatically extend without the necessity of any notice, agreement or recording by or between the parties for an additional ten (10) years, for a total of thirty-five (35) years, at which time this Agreement shall automatically terminate as to the Land without the necessity of any notice, agreement or recording by or between the parties. Upon the termination of this Agreement, neither party shall have any further obligations under this Agreement. However, such termination shall not affect any approval, permit, subdivision map or site plan that has been given, issued or approved by Town for any part of the Land as of the date of such termination. Town is willing to have this Agreement be effective for the period of time set forth in this Agreement because of the large number of acres owned by Owner.

(b) This Agreement shall automatically terminate as to any Lot without the necessity of any notice, agreement or recording by or between the parties anytime the required certificates of occupancy are issued by Town for all buildings on a Lot. A "Lot" (collectively "Lots") shall be any part of the Land, including common areas, that is identified in a recorded residential subdivision plat or site plan that has been approved by Town. This Agreement shall automatically terminate as to any part of the Land that is dedicated by deed, map of dedication or otherwise for Infrastructure and other public or governmental facilities and uses. Nothing contained in this section shall affect any obligation, tax, charge, assessment, encumbrance or other lien imposed on any Lot by the Town or a community facilities district.

23. **Assignment.** Owner shall have the right to sell, transfer or assign ("Transfer") part or all of the Land to any person or entity ("Transferee") at any time during the duration of this Agreement. Owner shall be released from the obligations under this Agreement with respect to the part of the Land that is transferred ("Transferred Land"), subject to the following:

(a) Owner has given Town notice of the Transfer, which shall include a legal description of the Transferred Land and the name, address and facsimile number for notice purposes, of the Transferee; and

(b) The Transferee has agreed in writing to be subject to all of the provisions of this Agreement as to the Transferred Land.

Any amendment to this Agreement in connection with the Transferred Land shall affect only the Transferred Land and shall not be an amendment of this Agreement as to the part of the Land that is not transferred. Any Default of this Agreement in connection with the Transferred Land shall affect only the Transferred Land and shall not be a Default under this Agreement as to the part of the Land that is not the subject of a Transfer.

24. **Lien Financing.** Owner shall have the right at any time, and as often as it desires, to finance the Land and to secure the financing with a lien or liens against the Land. Nothing contained in this section or this Agreement shall constitute a subordination of this Agreement to any voluntary or involuntary obligation, tax, charge, assessment, encumbrance or other lien against the Land.

25. **Compliance Confirmation.** When requested by either Town or Owner, which request can be made from time to time, the other shall use its best efforts to confirm the following in writing to the requesting party within thirty (30) days from the date of the request:

(a) This Agreement is unmodified and in full force and effect (or reasons why it is not); and

(b) Based upon knowledge, there are not any uncured Defaults under this Agreement (or reasons why there are).

26. **No Agency or Partnership.** Neither Town nor Owner is acting as the agent of the other with respect to this Agreement, and this Agreement shall not be deemed to create a partnership, joint venture or other business relationship between Town and Owner.

27. **No Third Party Beneficiary.** This Agreement shall not create any third party beneficiary rights to any person or entity who is not a party to this Agreement, including any lender to the Owner, unless expressly provided to the contrary in this Agreement (and then only to the extent so provided).

28. **Construction.** The provisions and exhibits of this Agreement shall be construed as a whole consistent with their plain meaning and intent, and they shall not be construed against one party or the other based upon which party prepared or influenced the drafting of any provision or exhibit of this Agreement.

29. **Recording.** Town shall record this Agreement with the County Recorder no later than ten (10) days after the execution of this Agreement.

30. **Time of Essence.** Time is of the essence of this Agreement.

31. **Benefit and Binding Effect.** This Agreement shall be for the benefit of and binding upon the parties hereto and their successors and assigns.

32. **Counterparts.** This Agreement, which may be executed in counterpart, shall constitute the entire agreement between the parties regarding the subject of this Agreement.

33. **Amendment.** Any amendment to this Agreement shall be in writing.

34. **Section Titles.** The section titles in this Agreement are not part of this Agreement and are for convenience only.

35. **Notices.** All notices, requests, waivers, approvals, acceptances or other communications under this Agreement shall be in writing and shall be deemed given when personally delivered or transmitted by facsimile or two days after mailing by certified mail, return receipt requested and postage prepaid, to the addresses or facsimile numbers set forth in the section of this Agreement titled "Parties," with copies to the following:

| | | |
|-----|-----------|----------------------------|
| (a) | For Town: | Joseph A. Blanton, Manager |
| | | Town of Buckeye |
| | | 100 North Apache, Suite A |
| | | Buckeye, Arizona 85326 |

With a copy to: Scott W. Ruby, Esq.
Gust Rosenfeld PLC
201 N. Central Avenue, Suite 3300
Phoenix, AZ 85073-3300
Facsimile Number: 602.340.1538

(b) Owner: Stardust Structured Investments No. 4, L.L.C.,
Sun Valley Partners, L.L.C.
BIF-Buckeye, L.L.C.
C/o Stardust Companies
Attention: Chris Heeter
6730 N. Scottsdale Road, Suite 230
Scottsdale, Arizona 85253
Facsimile Number: 480.607.5801

With a copy to: Stephen C. Earl
Earl, Curley & Lagarde, P.C.
3101 N. Central Avenue, Suite 1000
Phoenix, Arizona 85012-2641
Facsimile Number: 602.265.2195

36. **Force Majeure.** The performance of either party and the duration of this Agreement shall be extended by any causes that are beyond the control of the party required to perform, such as an act of God, civil or military disturbance and labor or material shortage.

37. **Governing Law.** This Agreement shall be governed by and construed under the laws of the state of Arizona, and any litigation shall take place only in Maricopa County, Arizona.

38. **Attorneys Fees.** The prevailing party in any litigation in connection with this Agreement shall be entitled to its attorneys' fees and costs.

39. **No Waiver.** No delay in exercising any right or remedy shall constitute a waiver thereof, and no waiver by the Town or Owner of the breach of any covenant of this Agreement shall be construed as a waiver of any preceding or succeeding breach of the same or any other covenant or condition of this Agreement.

40. **Severability.** If any provision of this Agreement is declared void or unenforceable by a court of competent jurisdiction, such provision shall be severed from this Agreement, which shall otherwise remain in full force and effect if the remaining provisions permit the parties to achieve the practical and proportional benefits and obligations of the arrangements contemplated by this Agreement. Otherwise, either party may terminate this Agreement.

Appendix E



April 22, 2003

Ms. Lindy Bauer
Environmental Program Coordinator
Maricopa Association of Governments
302 North 1st Avenue, Suite 300
Phoenix, Arizona 85003

**Re: Financial Capacity of Stardust Development, Inc. to complete wastewater
reclamation improvements pursuant to the Tartesso West MAG208 Application**

Dear Ms. Bauer:

Please be advised that Stardust Development, Inc. will continue to receive funding from its sole shareholder Stardust Holdings, Inc., to enable it to meet its financial obligations regarding the above referenced wastewater reclamation project. Stardust Holdings, Inc. and Stardust Development, Inc. jointly have available from institutional financial entities credit facilities in the amount of \$65 Million which are available for the funding of Stardust Development, Inc.'s requirements of the above referenced wastewater reclamation project.

Sincerely

A handwritten signature in black ink, appearing to read 'C.B. Heeter', written in a cursive style.

Chris B. Heeter
President

Appendix F



PACIFIC ADVANCED CIVIL ENGINEERING, INC.

17520 Newhope Street, Suite 200 • Fountain Valley, California 92708 • tel: 714.481.7300 • fax: 714.481.7299

April 9, 2003

Lee Sobchak
Federal Permits & Program Dev. Unit
Water Permits Section
1110 W. Washington St
Phoenix, AZ 85007
(602) 207-4503

Fax (602) 771-4674
Page 1 of 1

Re: Tartesso West WRF
Pre-application Meeting for APP

#7713E

Dear Lee:

On behalf of the Town of Buckeye and Pacific Environmental Resources Corporation, Inc. (PERC), PACE, Inc. would like to request an Aquifer Protection Permit (APP) pre-application meeting. An APP application is being prepared for the proposed Tartesso West WRF located north of Interstate 10 in western Buckeye, AZ. The facility will service developments and other unincorporated areas within the Town of Buckeye encompassing 13,500 acres. Construction for the 1.2 MGD first phase is tentatively scheduled for November, 2003. We would like to have the permit process largely completed prior to this date.

Therefore, in anticipation of submitting an APP to ADEQ, we are inquiring about the following items:

1. Who at ADEQ will process this application (i.e. do we continue to conduct correspondence through you Lee)?
2. Would representatives from ADEQ be available for a pre-application meeting during the week of April 21, 2003?

We look forward to working with you on this process. If you have any questions or comments, please do not hesitate to contact us.

Sincerely,
PACIFIC ADVANCED CIVIL ENGINEERING, INC.

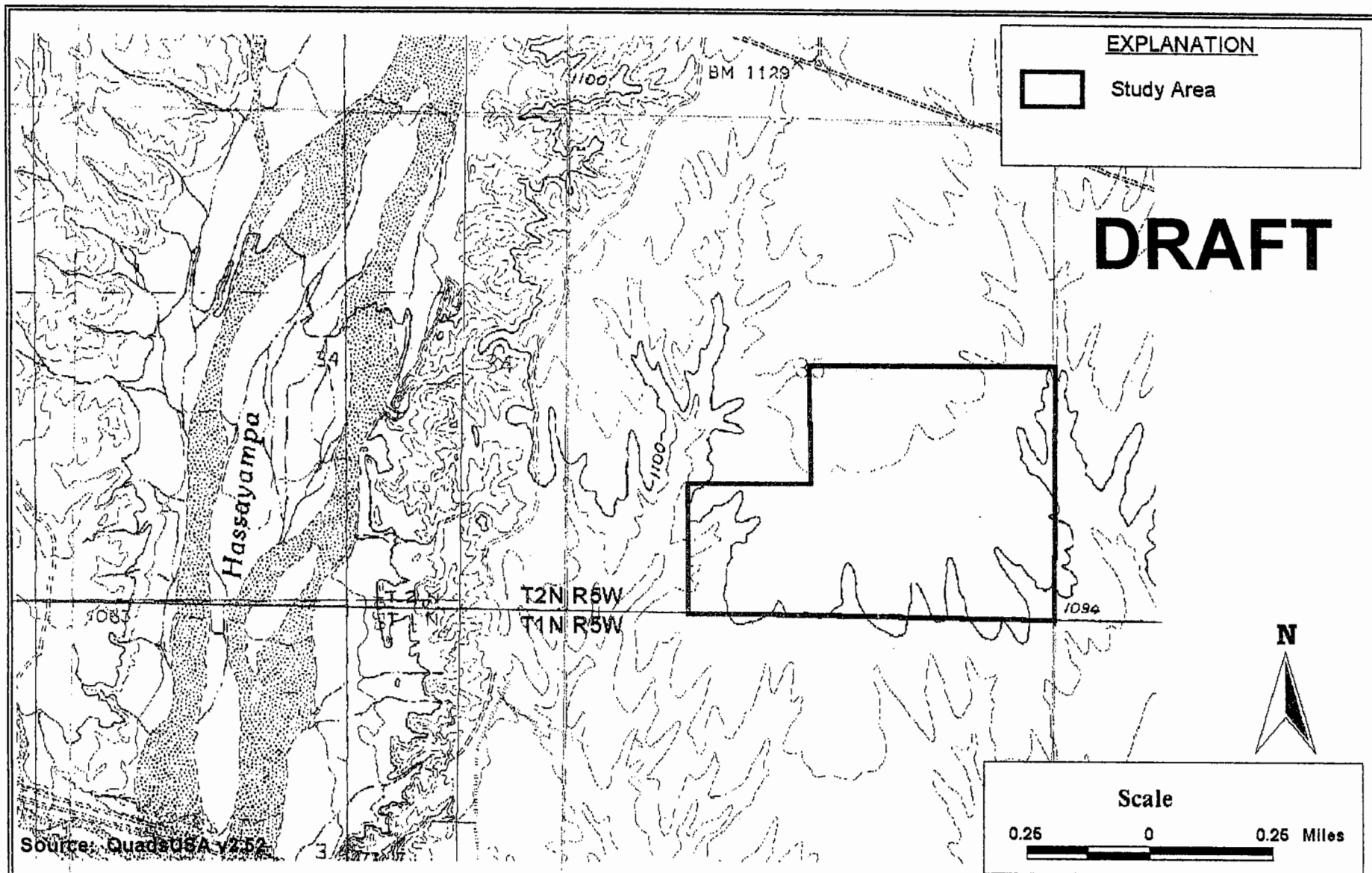
A handwritten signature in cursive script that reads "Erin E. Hubbard".

Erin E. Hubbard, E.I.T.
Project Engineer II

AK/eh/ss

cc: Duong Do (PACE),
Steve Owen (PERC)

Appendix G



Southwest Ground-water
 Consultants, Inc.

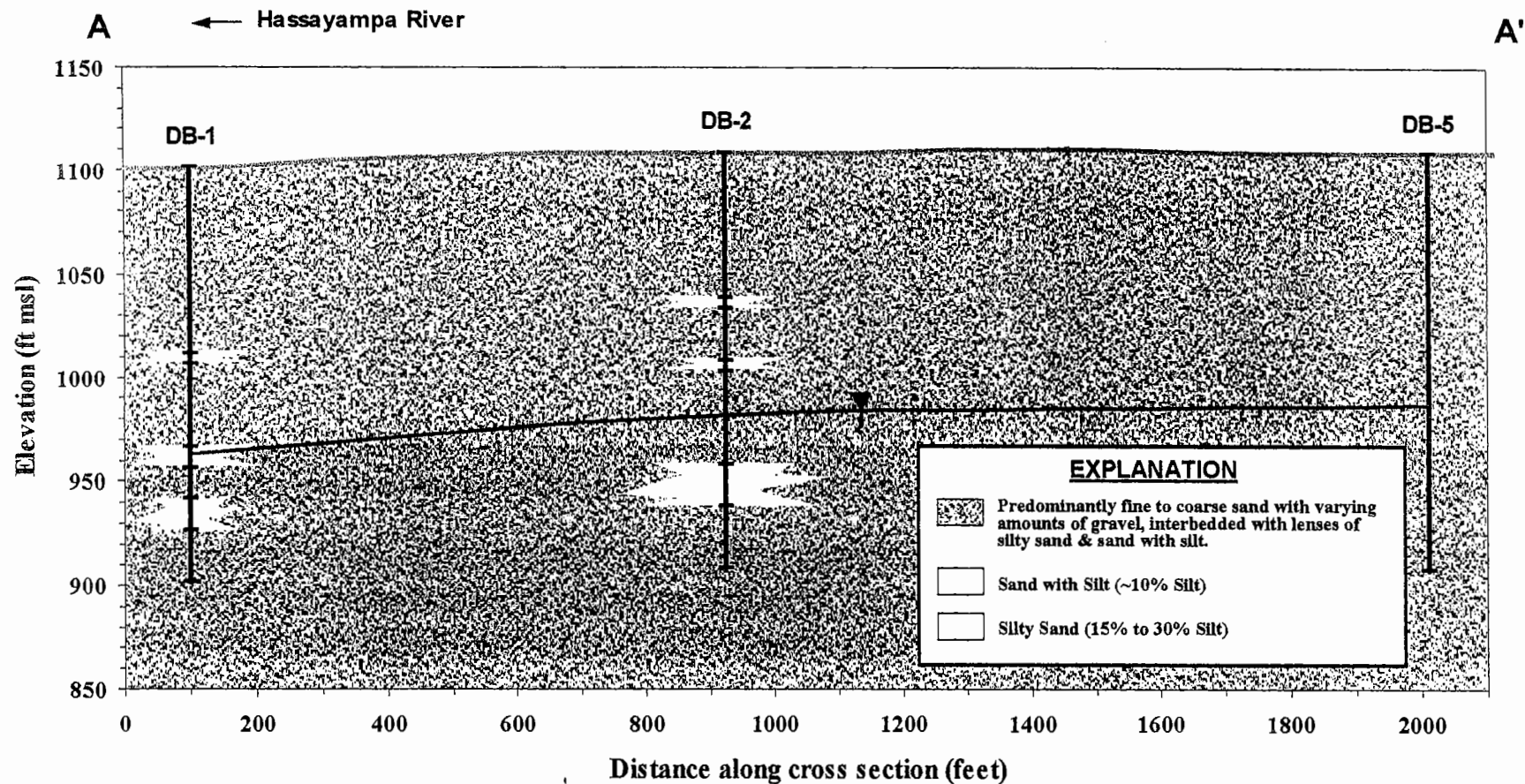
April 8, 2003

Project B.678

VICINITY MAP

Tartesso West, Maricopa County, Arizona

Figure
D-1



Southwest Ground-water
 Consultants, Inc.

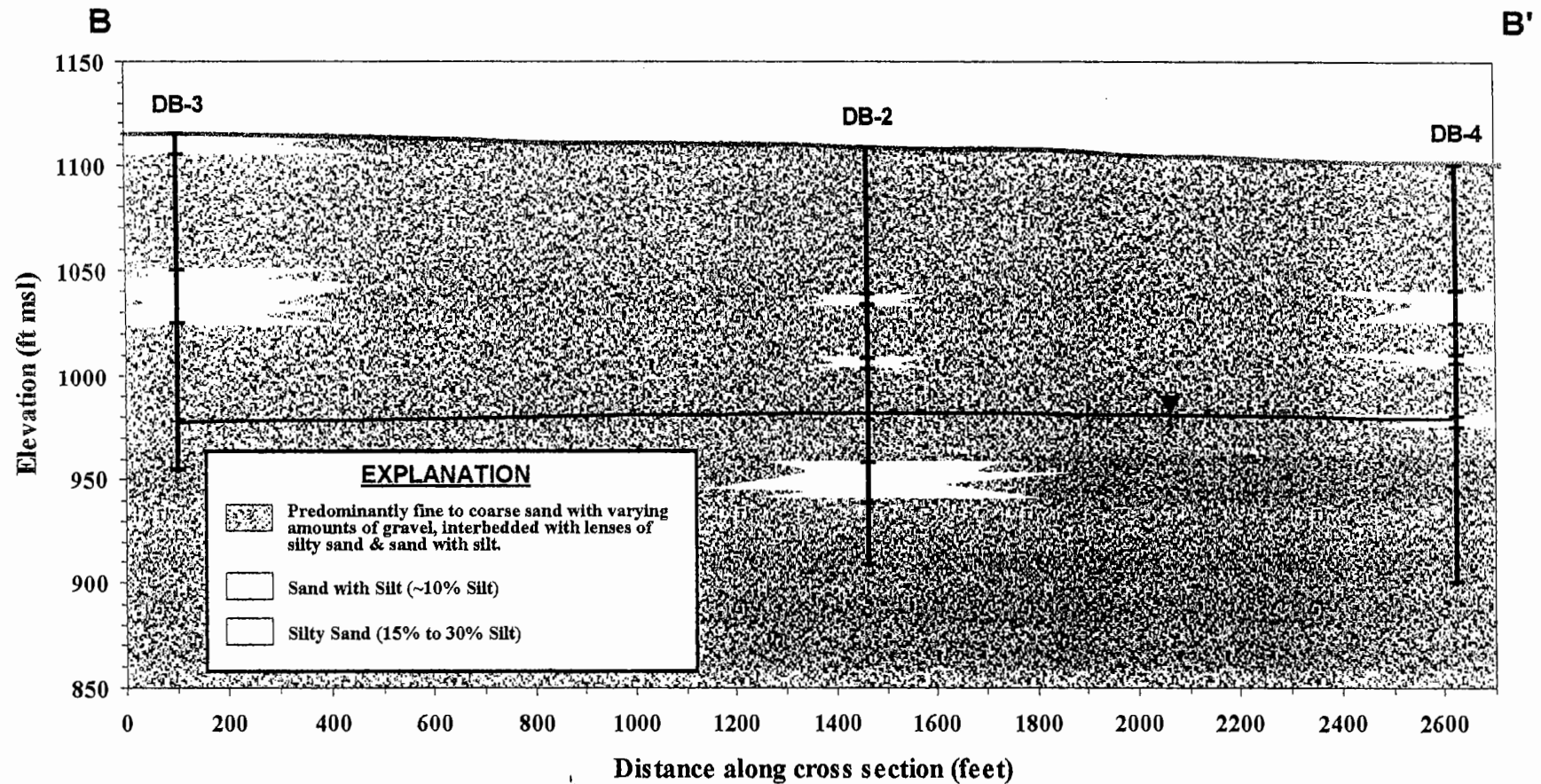
April 8, 2003

Project B.678

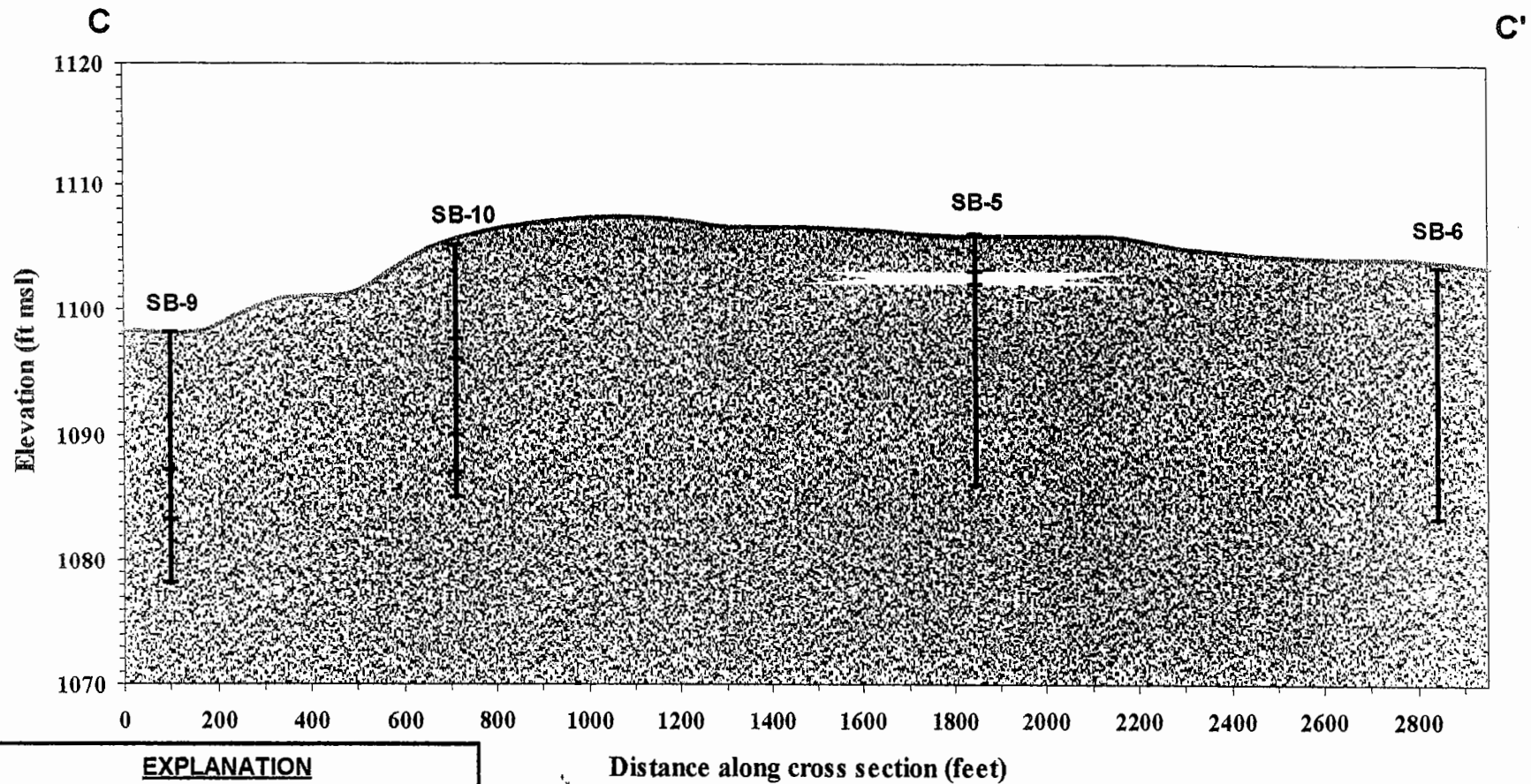
DEEP BORING CROSS-SECTION A-A'

Tartesso West, Maricopa County, Arizona


Figure
D-3



DRAFT



DRAFT

Southwest Ground-water
 Consultants, Inc.

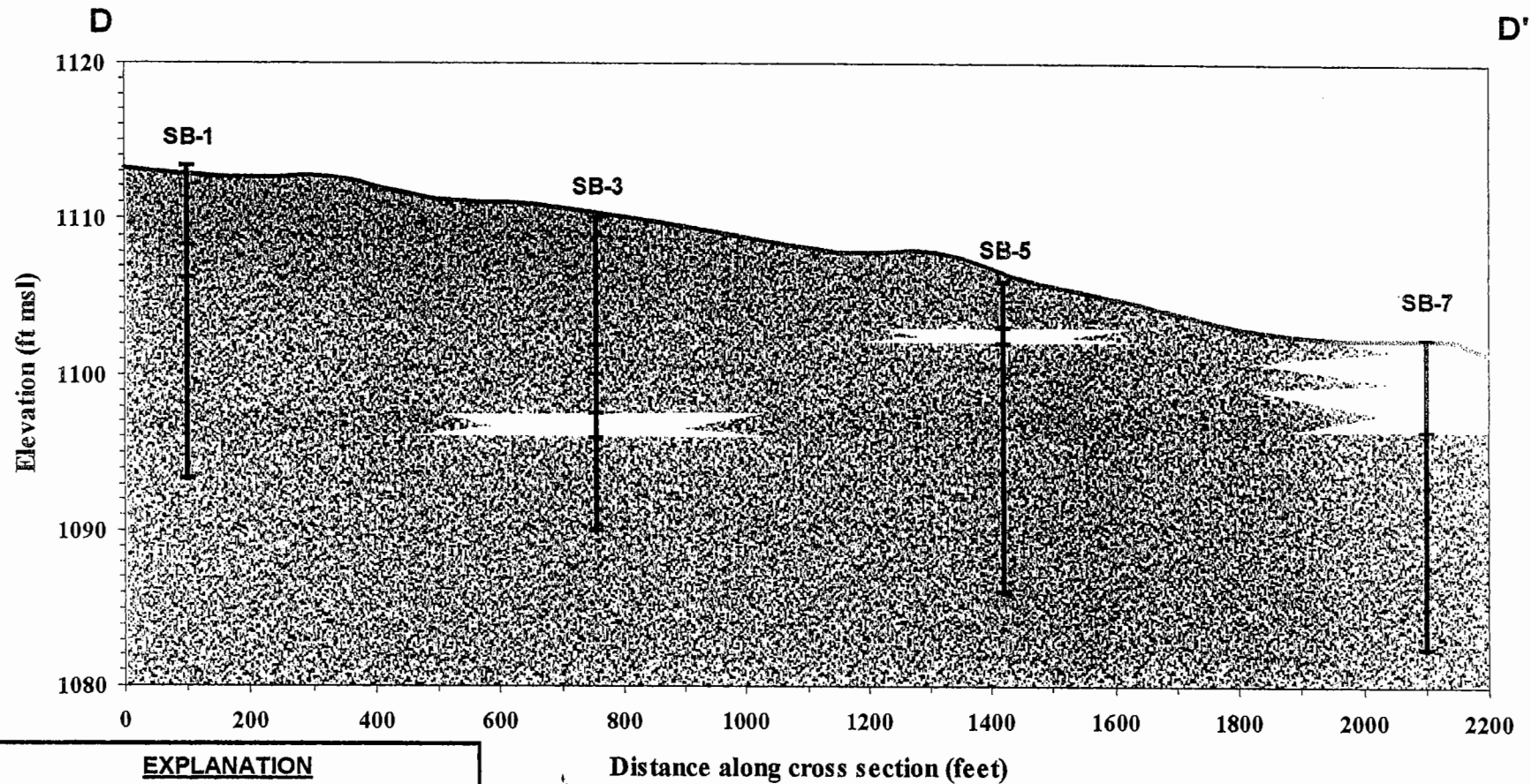
April 8, 2003

Project B.678

SHALLOW BORING CROSS-SECTION C-C'

Tartesso West, Maricopa County, Arizona

Figure
D-5



DRAFT

Southwest Ground-water
 Consultants, Inc.

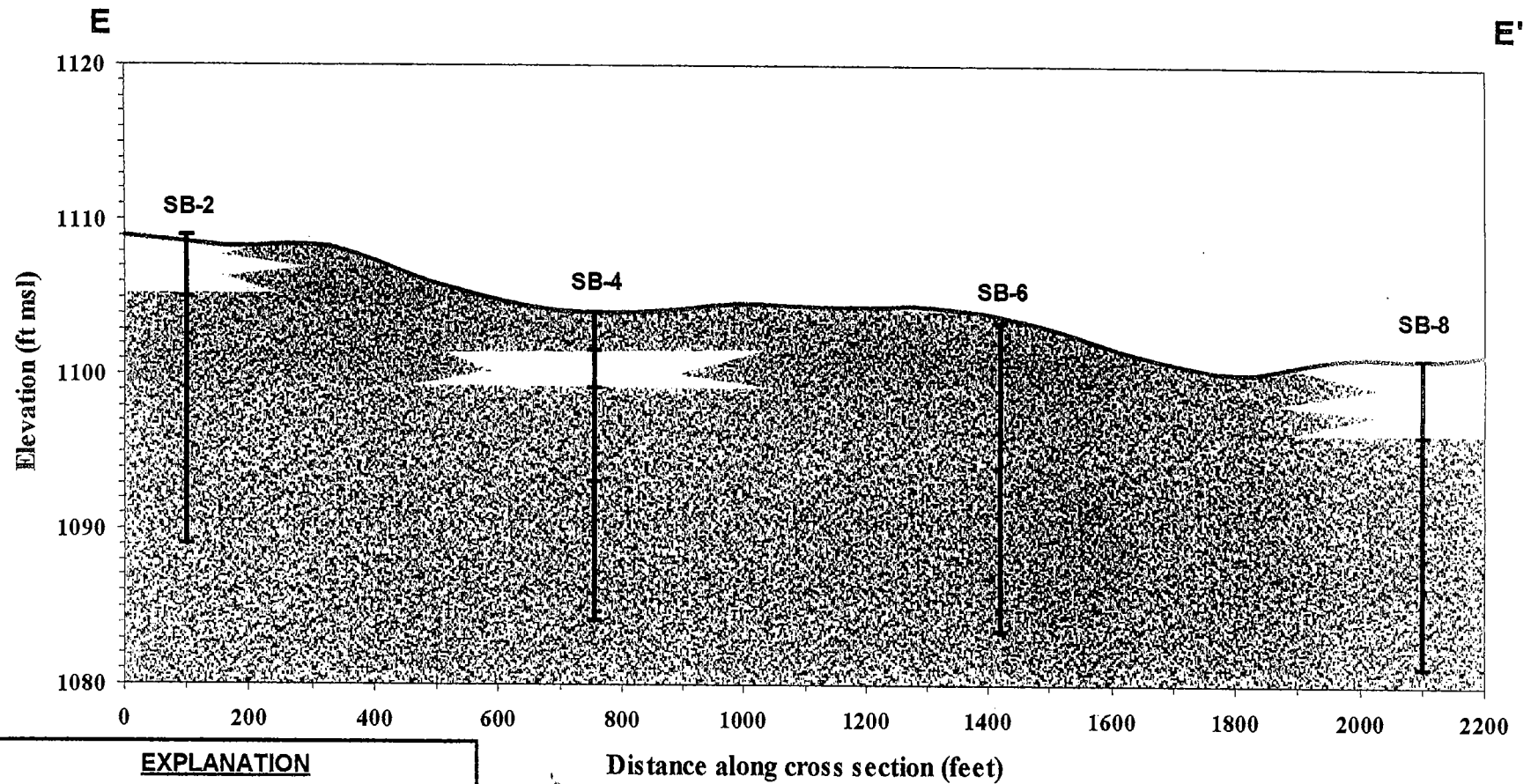
April 8, 2003

Project B.678

SHALLOW BORING CROSS-SECTION D-D'

Tartesso West, Maricopa County, Arizona

Figure
D-6



DRAFT

Southwest Ground-water
 Consultants, Inc.

April 8, 2003

Project B.678

SHALLOW BORING CROSS-SECTION E-E'

Tartesso West, Maricopa County, Arizona

Figure

D-7

TABLE 1
TARTESSO WEST RECHARGE PROJECT
Single Ring Infiltrometer Testing Results

TABLE 1
TARTESSO WEST RECHARGE PROJECT
Single-Ring Infiltration Testing Results

| Site ID | Effective Ksat (ft/day) | Cadastral Location |
|---------|-------------------------|--------------------|
| P-1 | 0.70 | B(2-5)35D |
| P-4 | 1.88 | B(2-5)35D |
| P-9 | 0.88 | B(2-5)35D |
| P-12 | 3.75 | B(2-5)35D |
| P-13 | 0.50 | B(2-5)35D |
| P-16 | 1.79 | B(2-5)35D |
| P-20 | 1.02 | B(2-5)35D |
| P-23 | 1.61 | B(2-5)35D |
| P-25 | 1.21 | B(2-5)35D |
| P-26 | 0.61 | B(2-5)35D |
| P-29 | 1.16 | B(2-5)35D |
| P-34 | 0.48 | B(2-5)35D |
| P-37 | 1.03 | B(2-5)35D |
| P-38 | 0.86 | B(2-5)35D |
| P-41 | 1.51 | B(2-5)35D |
| P-44 | 0.79 | B(2-5)35D |
| P-47 | 9.72 | B(2-5)35CDA&B |
| P-48 | 3.68 | B(2-5)35CDA&B |
| P-49 | 1.03 | B(2-5)35CDA&B |
| P-50 | 1.01 | B(2-5)35CDA&B |
| P-51 | 7.92 | B(2-5)35CDA&B |
| P-52 | 4.83 | B(2-5)35CDA&B |
| P-53 | 1.66 | B(2-5)35CDA&B |
| P-54 | 1.01 | B(2-5)35CDA&B |
| P-55 | 0.68 | B(2-5)35CDA&B |
| P-56 | 2.67 | B(2-5)35CDA&B |
| P-57 | 5.51 | B(2-5)35CDA&B |
| P-58 | 10.30 | B(2-5)35CDA&B |
| P-59 | 0.78 | B(2-5)35CDA&B |
| P-60 | 1.17 | B(2-5)35CDA&B |

B(2-5)35D Average = 1.24 ft/day
Effective Area= 35 acres
Annual Rate= 15,789 ac-ft/year (14.1 mgd)

B(2-5)35CDA&B Average = 3.71 ft/day
Effective Area= 5 acres
Annual Rate= 6,774 ac-ft/year (6.0 mgd)

Combined Annual Rate= 22,563 ac-ft/year (20.1 mgd)

Note:

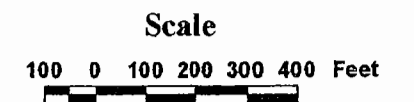
Approximately 160 acres were characterized during the investigation. However, for the purpose of these calculations, area available for recharge (effective area) is reduced by a factor of 4, assuming that 50% of the area would be utilized for roads and sloped basin boundaries and that basins would be unused 50% of the time to allow for operational and maintenance flexibility.

DRAFT

SITE MAP
TARTESSO WEST
 Maricopa County, Arizona

EXPLANATION

- DB-1 Deep Boring Location
- SB-1 Shallow Boring Location
- ▲ P-1 Percolation Test Pit Location
- A—A' Deep Boring Cross-section Locations (See Figures 3 and 4)
- C—C' Shallow Boring Cross-section Locations (See Figures 5 and 6)

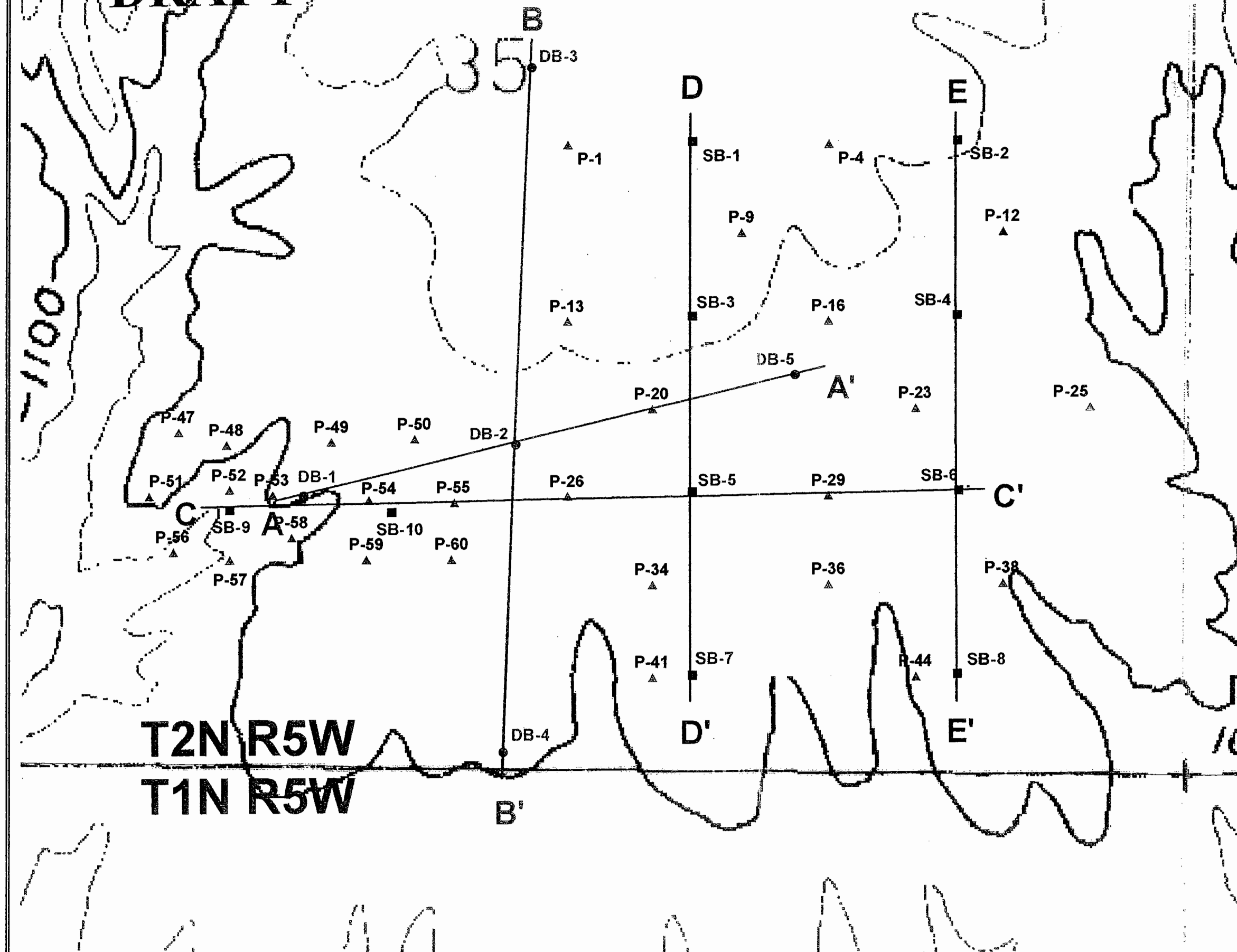


Source: QuadsUSA v2.51

Southwest Ground-water Consultants, Inc.

April 8, 2003 Project B.678

Figure D-2



PUBLIC HEARING ON THE DRAFT MAG 208 WATER QUALITY MANAGEMENT PLAN AMENDMENT FOR THE TOWN OF BUCKEYE TARTESSO WEST WATER RECLAMATION FACILITY Monday, July 28, 2003 at 4:00 p.m. MAG Office, Suite 200 - Cholla Room 302 North 1st Avenue Phoenix, Arizona 85003 The Maricopa Association of Governments (MAG) will conduct a public hearing on Monday, July 28, 2003 on the Draft MAG 208 Plan Amendment for the Town of Buckeye Tartesso West Water Reclamation Facility. The purpose of the hearing is to receive public comments on the draft amendment. The proposed plant would have an ultimate capacity of 18 million gallons per day and would be located north of Interstate 10, west of the Sun Valley Parkway. Excess reclaimed water would be disposed of through reuse, recharge, and an Arizona Pollutant Discharge Elimination System permit discharge. Following consideration of comments at the hearing, it is anticipated that the MAG Water Quality Advisory Committee will make a recommendation to the MAG Management Committee. On September 10, 2003, the MAG Management Committee is anticipated to make a recommendation to the MAG Regional Council. It is anticipated that the MAG Regional Council will take action on the draft plan amendment on September 24, 2003. Written and verbal comments are welcome at the hearing. A copy of the draft document will be available for public review at the MAG Office from 9:30 a.m. to 5:30 p.m. Monday through Friday, beginning Friday, June 20, 2003. Copies will also be available for review at the Glendale Public Library, 5959 West Brown Street, Mesa Public Library, 64 East First Street, and Phoenix Central Public Library, 1221 North Central Avenue. For further information or to submit written comments on the draft prior to the hearing, contact Brenda Geisen, MAG, at (602) 254-6300. 03331 June 10, 2003.

THE ARIZONA REPUBLIC

STATE OF ARIZONA
COUNTY OF MARICOPA } SS.

Melissa Daams, being first duly sworn, upon oath deposes and says: That she is a legal advertising representative of the Arizona Business Gazette, a newspaper of general circulation in the county of Maricopa, State of Arizona, published at Phoenix, Arizona, by Phoenix Newspapers Inc., which also publishes The Arizona Republic, and that the copy hereto attached is a true copy of the advertisement published in the said paper on the dates as indicated.

The Arizona Republic

6/10/2003

Melissa Daams

Sworn to before me this
10TH day of
June A.D. 2003



Gloria Saldivar
Notary Public

June 11, 2003

TO: Interested Parties for Water Quality

FROM: Brenda Geisen, Environmental Planner

SUBJECT: NOTIFICATION OF A PUBLIC HEARING ON THE DRAFT MAG 208 WATER
QUALITY MANAGEMENT PLAN AMENDMENT FOR THE TOWN OF BUCKEYE
TARTESSO WEST WATER RECLAMATION FACILITY

Public Hearing

Monday, July 28, 2003
MAG Office, Suite 200 - Cholla Room
302 North 1st Avenue
Phoenix, Arizona 85003

The Maricopa Association of Governments (MAG) would like to invite you to attend a public hearing on the Draft MAG 208 Water Quality Management Plan Amendment for the Town of Buckeye Tartesso West Water Reclamation Facility on July 28, 2003 at 4:00 p.m. The Draft 208 Plan Amendment for the Town of Buckeye includes the proposed Tartesso West Water Reclamation Facility with an ultimate capacity of 18.0 million gallons per day.

The facility would be located north of Interstate 10, west of the Sun Valley Parkway. Excess reclaimed water from the proposed facility would be disposed of through reuse, recharge, and possibly through an Arizona Pollutant Discharge Elimination System Permit discharge. The Draft MAG 208 Plan Amendment for the Town of Buckeye Tartesso West Facility includes a description of the facility; a summary of the treatment process; the proposed effluent disposal plan; and the implementation schedule for the facility. Written and verbal comments are welcome at the public hearing.

A copy of the draft 208 amendment will be available for public review at the MAG Office Building from 8:30 a.m. to 5:30 p.m. Monday through Friday beginning on Friday, June 20, 2003. Copies will also be available for review at the City of Glendale Public Library, 5959 West Brown Street; City of Mesa Public Library, 64 East First Street; and City of Phoenix Central Public Library, 1221 North Central Avenue. For further information or to submit written comments on the draft prior to the hearing, contact Brenda Geisen, MAG, at (602) 254-6300.

**RESPONSE TO PUBLIC COMMENTS ON THE
DRAFT MAG 208 WATER QUALITY MANAGEMENT PLAN AMENDMENT FOR
THE TOWN OF BUCKEYE TARTESSO WEST WATER RECLAMATION FACILITY**

JULY 28, 2003 PUBLIC HEARING

The Maricopa Association of Governments (MAG) appreciates the comments made during the public comment period for the Draft MAG 208 Water Quality Management Plan Amendment for the Town of Buckeye Tartesso West Water Reclamation Facility. An advertised public hearing on the subject was conducted by MAG on July 28, 2003. Seven testimonials were submitted. The following represents the MAG response to the comments.

COMMENTS FROM VICE MAYOR ALAN W. NEWBERRY, TOWN OF BUCKEYE

Comment: The Tartesso Facility is part of Sun Valley which has gone through the Buckeye review process without opposition. I question whether the Committee has the jurisdiction to examine the link between Tartesso and the Combine Pipeline. I would like the West Maricopa Combine to clarify what their concern is. Tartesso would not impact the Combine Pipeline because it is far from any proposed wells and would introduce better quality water.

Response: Thank you for your comment indicating that Tartesso and Sun Valley have gone through the Buckeye review process without opposition and that the Tartesso Facility would not negatively impact the Combine Pipeline. MAG is committed to preserving local government water quality management planning efforts to minimize any negative environmental and public health impacts among neighboring facilities in their Municipal Planning Area. MAG is also committed to providing opportunities for public involvement throughout the 208 Plan amendment process.

The MAG Water Quality Advisory Committee (WQAC) serves as a technical advisory committee to the MAG Management Committee and MAG Regional Council on water quality issues and does not have jurisdiction regarding the link between Tartesso and the Combine Pipeline. However, the Town of Buckeye requested that the Tartesso Facility be added to the MAG 208 Plan through the formal 208 analysis and amendment process on April 1, 2003. As a part of the amendment process, there is a federal requirement to conduct a public hearing on the draft amendment. The 208 Plan calls for the WQAC to review the draft amendment and authorize MAG to conduct a hearing. For the draft Tartesso amendment, the WQAC included provisos in their authorization. During the public hearing, the Town of Buckeye and City of Goodyear indicated that the provisos had been addressed. Immediately following the hearing, the WQAC considered public comments and then unanimously recommended approval of the draft amendment to the MAG Management Committee. MAG has been designated by the Governor and the U.S. Environmental Protection Agency as the areawide water quality management planning agency for the Maricopa County area under Section 208 of the Clean Water Act.

COMMENTS FROM JOSEPH BLANTON, TOWN MANAGER, TOWN OF BUCKEYE

Comment: The Town of Buckeye supports the proposed Tartesso Facility and it is a Town project which would lie within the Buckeye Municipal Planning Area. A water agreement for the Sun Valley area, where the Tartesso Facility would be located, had been developed before annexation of the area. The Sun Valley area has gone through considerable planning since 1998 and many area facilities for the project have been approved without objection. The Tartesso Plant would be surrounded by residential development and the Town would not plan a facility that would be detrimental to Buckeye residents. Evaluation of the Tartesso Facility shows that it would not negatively impact groundwater or any existing or planned wells.

Response: Thank you for your comments relaying the Town of Buckeye support for the project, providing a Town of Buckeye history of the project, and indicating that there would be no negative groundwater or well impact from the Tartesso project. MAG is committed to preserving local government water quality management planning efforts to minimize any negative environmental or public health impacts among neighboring facilities in their Municipal Planning Area and to providing opportunities for public involvement throughout the 208 Plan amendment process.

COMMENTS FROM STEVE NOEL, SOUTHWEST GROUNDWATER CONSULTANTS

Comments: I am a hydrologist for Tartesso. As stipulated by the Committee, Goodyear and Buckeye have met to resolve the Goodyear concerns and a hydrogeologic report was prepared and has been reviewed by Buckeye, Goodyear, and West Maricopa Combine. The report would be submitted to the State agencies with the application for facility permits. I met with Fluid Solutions, the hydrologist for the West Maricopa Combine, and with the City of Goodyear, and an impact analysis on recovery wells with respect to the Combine Project had been conducted. The parties came to a consensus in terms of no negative Tartesso impacts on the West Maricopa Combine recovery wells. The parties agreed that a preliminary hydrologic model showed that no existing recovery wells would be impacted by the Tartesso project, that Tartesso mound rise would be a positive addition to the aquifer system, and that Tartesso would reduce the impact of high Total Dissolved Solids water flowing into recovery wells.

Response: During the June 5, 2003 MAG Water Quality Advisory Committee (WQAC) meeting, the City of Goodyear objected to the Buckeye Tartesso Facility and requested further evaluation of the facility's potential impact on the planned Combine Pipeline. At that meeting, the WQAC authorized MAG to conduct a public hearing on the draft amendment with the provisos that Buckeye meet with Goodyear to address their concerns, that resolution be presented to the Committee at the hearing, and that a hydrologic report be prepared. At the July 28, 2003 public hearing, the Town of Buckeye indicated that they and Tartesso representatives had met with Goodyear and had agreed to commission the Tartesso Hydrogeologic Study referenced by Mr. Steve Noel. Buckeye indicated that the Study shows that the Tartesso Facility would not impact existing or potential future wells that the West Maricopa Combine Pipeline may install.

At the hearing, the City of Goodyear and the Maricopa Combine indicated that they do not oppose the Tartesso Facility, but want to see water quality safeguards built in and Arizona Department of Environmental Quality (ADEQ) review through their permitting process. Immediately following the hearing, the WQAC considered public comments received and it was unanimously passed to recommend approval of the Draft 208 Plan Amendment for Buckeye Tartesso West Water Reclamation Facility to the MAG Management Committee.

COMMENTS FROM CARROLL REYNOLDS, TOWN OF BUCKEYE

Comment: The State agencies have regulatory requirements and controls on the quality of water that may be introduced into the aquifer. State monitoring requirements have become more strict and the Tartesso Facility would produce Class A+ water and lower Total Dissolved Solids than the water to be recharged by the Combine. Tartesso would help prevent the Combine project from drawing in existing high Total Dissolved Solids water from south.

Response: Thank you for your comments indicating that the State agencies, such as ADEQ, have regulatory requirements and controls for water quality that may reach the aquifer and that the proposed Tartesso Facility would produce a quality of water that meets the State requirements.

COMMENTS FROM STEPHEN EARL, EARL, CURLEY & HAGANTE

Comment: At the last meeting, a concern was brought up over whether effluent pond and percolation could affect the West Maricopa Combine Pipeline Project. I want to better understand the Combine's concern. I believe that the Combine does not yet have an agreement with any city, but wants to put Central Arizona Project water into the Hassayampa River for recharge, then withdraw water near Interstate 10 and send it to other cities. I think that the Combine is concerned that effluent could mix with groundwater and affect recovery. Steve Noel has assured me that there would be no negative impact. The Combine will have the opportunity to present concerns to ADEQ during their permitting process.

Response: In comments given at this hearing, both Fluid Solutions and West Maricopa Combine state that they do not oppose the Buckeye Tartesso Water Reclamation Facility, but voice concern over effluent quality. According to the Town of Buckeye, the Tartesso Hydrogeologic Study, commissioned at the request of the City of Goodyear, indicated that there will be no negative impact on existing wells because the Combine doesn't currently own any wells. Buckeye indicates that the Study shows that there will be no negative impact on any planned wells because design of the Facility uses sound scientific principals and will be constructed to the most stringent standards.

COMMENTS FROM NORM FAIN, FLUID SOLUTIONS

Comments: I represent the West Maricopa Combine and potential users of the Pipeline, which may eventually include many cities and even Buckeye. The Combine's concern is not that Tartesso is a bad project and the Combine actually thinks it will be a good project. The Combine

wants to make sure that water quality from the Tartesso project does not present problems in the future. The Combine met with Steve Noel and put together a list of issues and possible solutions. The Combine raised the concerns with Tartesso during the 208 process to get a statement that ADEQ will review the issues during their permitting process. The Combine is asking for Total Organic Carbons to create an increase of less than one milligram per liter, a limitation on Nitrogen, and to consider that Endocrine Disruptors may be a problem in the future.

Response: The Town of Buckeye indicates that the Buckeye Tartesso Water Reclamation Facility has been designed to produce class A+ effluent and to recharge this effluent per the applicable rules, regulations, and standards required by applicable law. The quality of the effluent from the plant is regulated by other State agencies such as the Arizona Department of Environmental Quality.

COMMENTS FROM J. JOHN MIHLIK, WEST MARICOPA COMBINE

Comments: The West Maricopa Combine does not oppose the proposed Tartesso Project, and we only want to see that safeguards are built into the project. There are an existing 150 homes in the area which no one has brought up and these residents are very real. The Combine's recharge project is on its way and a siphon sheet has already been built into the canal for the project. The Combine has received a letter of intent from Goodyear and all that is left is an actual contract. The Combine wants to be reasonable and cooperate to consider additional monitoring to ensure future safety.

Response: The Town of Buckeye indicates that the Buckeye Tartesso Water Reclamation Facility is designed to be extremely neighborhood friendly. The Town notes that other facilities of this nature produce virtually no noise or odors and have no other objectionable characteristics. The Town indicates that design of the Facility is as esthetically pleasing as it is functionally efficient. The Town of Buckeye and Tartesso realize that the Facility will eventually be surrounded by residential development and have planned a site that will have virtually no negative impacts on surrounding residents.

Maricopa Association of Governments
Received

AUG 22 2003

MARICOPA ASSOCIATION OF GOVERNMENTS
WATER QUALITY ADVISORY COMMITTEE AND
PUBLIC HEARING ON THE DRAFT MAG 208 PLAN AMENDMENT
FOR THE BUCKEYE TARTESSO WEST WRF

July 28, 2003
4:00 p.m.
Phoenix, Arizona

GLENNIE REPORTING SERVICES, L.L.C.
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By: Janet Hauck, RPR
Arizona Certified
Court Reporter 50522

1 The Public Hearing was taken on July 28,
2 2003, commencing at 4:00 p.m., at the offices of the
3 Maricopa Association of Governments, 302 North 1st
4 Avenue, Suite 300, Phoenix, Arizona, before
5 JANET HAUCK, RPR, a Certified Court Reporter,
6 Certificate No. 50522, for the State of Arizona.

7 Mr. Roger Klingler for the City of
8 Scottsdale, acted as the Chairman.

9 Members attending were Rich Williams, City
10 of Surprise; Patrick Clay, U of A Cooperative
11 Extension; Eugene Jensen, Citizen Representative;
12 Jacqueline Strong (telephonic), City of Chandler;
13 Bill Haney (telephonic), City of Mesa; Joel Wade
14 (videoconference), City of Goodyear; Chris Ochs, City
15 of Glendale; William Mattingly, City of Peoria. Also
16 present was Brenda Geisen.

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21 The following proceedings were had:

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1 MR. KLINGLER: I would like to open the
2 public hearing for this agenda item. I think we're
3 going to begin with a presentation from the Town of
4 Buckeye. I believe Joe Blanton, the city manager and
5 vice mayor here would like to do that. I believe Joe,
6 you would like to start?

7 MR. BLANTON: Thank you, Mr. Chairman,
8 members of the committee. My name is Joe Blanton. I'm
9 the town manager for the Town of Buckeye.

10 I just wanted to emphasize a couple points
11 here regarding the agenda item. One, that this
12 reclamation facility is a town project, Town of Buckeye
13 project. It's within our municipal limits, and there's
14 been considerable planning with respect to Sun Valley.
15 In fact, the Town of Buckeye started planning this in
16 1988, 15 years ago.

17 Since then, we've approved eight master
18 planned communities all with reclamation facilities up
19 and down the Hassayampa River. This happens to be the
20 first one in line coming before you. There will be
21 many more.

22 Again, I want to emphasize that we've done
23 a considerable amount of planning regarding the
24 Tartesso West Water Reclamation Facility. It is within
25 a village of Tartesso West and it is surrounded by

1 future residential planning units.

2 We wouldn't plan something which would be
3 detrimental to future residents of the Town of Buckeye.
4 We're confident that the siting of this reclamation
5 facility is appropriate and will show that it will not
6 have any impacts on existing wells.

7 With that, I would like to turn over to our
8 vice mayor, Alan Newberry. He's been around probably
9 for all of the 15 years of planning Sun Valley.

10 Again, with respect to Tartesso West, it's
11 gone through our planning commission. They are
12 recommending unanimously to approve this master planned
13 community. We've had workshops with the town council,
14 and it is scheduled for our next council agenda on
15 August 5th for action.

16 So with that, I'll turn it over to Vice
17 Mayor Newberry.

18 MR. NEWBERRY: Thank you, Joe.

19 Mr. Chairman and committee members, my name
20 is Alan Newberry. I am the vice mayor of the Town of
21 Buckeye and have been on the town council since 1986.

22 I was involved in the original water
23 agreement for the Sun Valley area before it was even
24 annexed into the town, and I was involved in the
25 annexation of Sun Valley.

1 The town has heard that since 1988 it had
2 at least five master plans for the Sun Valley area, and
3 I'm a little surprised that we had any opposition at
4 this stage of the game because we have not had any
5 attendance by anyone concerning any recharge or
6 withdrawal wells at any of those hearings, any of those
7 proceedings, so it was a little surprising to see this
8 come along.

9 I would like to comment that I think that
10 the committee here probably doesn't have any
11 jurisdiction for examining the link between the two
12 projects, the Buckeye Tartesso project and the pipeline
13 to the future project.

14 Last time I looked, I don't think we have
15 any contracts with Mr. Mihlik, nor does he have any
16 contracts with any other existing cities at this time.

17 The impact of this project, as Joe stated,
18 and as the technical experts will state, is a moot
19 point. We're at least a mile away from any proposed
20 well sites that we're aware of.

21 We are going to be introducing better
22 quality water into the aquifer, into the recharge
23 project, than could be introduced out of the CAP canal.
24 So the impact on the wells, I think, is going to be
25 negligible if existent at all. The wells also have

1 protection through the ADEQ and ADWR.

2 This is a real project. This project has
3 been funded. This project has been approved by the
4 city. The city has given it zoning. The city has
5 given it permits, and we are working toward a real
6 project. This is not a conceptual project. This is a
7 project that is going to happen, and I testify now that
8 I don't believe any other projects have made that kind
9 of an effort or have reached the point that we are
10 right now with this. We are not \$80 million away from
11 making this happen. It is a reality and it will be
12 happening.

13 In the end, I would like to just say that I
14 think that western Maricopa County is trying to avoid
15 the perception of withdrawing clean water that has the
16 effluent tag on it. All that's at the expense of the
17 Town of Buckeye.

18 If we're not allowed to do this project,
19 then we would have to withdraw CAP water which is of a
20 poorer quality than the water that would be going into
21 the effluent -- or coming out of the effluent treatment
22 plant, and the developers will have to completely
23 re-engineer their plans on how we're going to deal with
24 the effluent and with water withdrawal and treatment.

25 So with that, I would like to close with

1 another thank you for your time, and I'll turn it over
2 to your next speaker.

3 MR. KLINGLER: Thank you, Vice Mayor
4 Newberry.

5 Just kind of a comment on the process here,
6 we're going to have an overview presentation, I
7 believe, from Steve Owen of PERC and Steve Noel of
8 Southwest. Then following the presentation, anyone
9 from the public that would like to make comments for
10 the record can do so. We do have the court reporter to
11 make the official record. We will accept written
12 comments, also. And again, we just want one person
13 speaking at a time.

14 Anyone who wishes to speak, please fill out
15 a form on the table and hand it to Brenda over here,
16 and we'll have a three-minute time limit, and when two
17 minutes are up, we'll have the yellow light letting
18 people know that they have one more minute, and we'll
19 have a red light at the end of the three-minute period
20 for the people for the public comment. So again, we'll
21 get to that after we get the overview from Steve, so
22 please proceed.

23 MR. OWEN: Thank you. I'd also like to
24 thank you, Mr. Chairman, and the members of the water
25 quality advisory committee that are here today.

1 First of all, I would like to start out by
2 telling you that this MAG 208 Amendment is for a new
3 water reclamation facility being called Tartesso Water
4 Reclamation Facility.

5 If we can go to the next slide, we'll see
6 that the Tartesso development is a large development on
7 the west side of Phoenix just west of the White Tanks
8 Mountains there.

9 We'll talk briefly about the Tartesso
10 development, population, wastewater protections, and
11 the Tartesso water reclamation facility as well as
12 effluent disposal.

13 This project, as was mentioned earlier, is
14 a real project and moving forward, the financing coming
15 from Stardust Development Corporation, and the
16 ownership will be by the Town of Buckeye, and operation
17 will be Town of Buckeye contracted out to a service
18 provider at this time to be PERC.

19 The next slide you will see the planning
20 area, planning and service area that incorporates
21 Tartesso. And if you note the note up top there,
22 Tartesso Water Reclamation Facility will be sized to
23 handle Tartesso West, Tartesso North and surrounding
24 properties. So there's quite a bit of forward thinking
25 and planning going on in our plans to provide this

1 water reclamation facility at this site.

2 The next slide shows us the Tartesso West
3 master plan with the different planned residential
4 units throughout the master plan. If you can see down
5 there in the southwest corner is where the treatment
6 facility will be located.

7 The next slide shows us the estimated
8 population approximately 140,000 people will be served
9 by 2022 by this treatment facility that will begin at
10 1.2 mgd in the first phase and expand to an ultimate of
11 18 mgd.

12 If we go to the next slide we'll see
13 starting at Phase I we have the 1.2 mgd with future
14 phases going out from that point dependent on growth
15 and base of growth in that area. They will have the
16 flexibility to go larger in the next phases or continue
17 on with 1.2 mgd phases.

18 The next slide shows us the Tartesso water
19 reclamation facility site. We chose this site because
20 wastewater flows by gravity to the treatment facility
21 site. It has good setback areas. It's not going to be
22 next to any neighbor-type issues with homes or
23 anything. It's a good use of that land. One of the
24 biggest reasons is because it's close to the discharge
25 location where we're going to have our recharge basins.

1 The next slide gives you an idea of what
2 the PERC ASP facility looks like. It's a hybrid of the
3 sequence of batch reactor technology. It obviously
4 provides biological nutrient removal process which is
5 good for the effluent water to remove the nutrients.
6 Finally, it's also a tertiary treatment facility using
7 the disk filtration system. It meets or exceeds ADEQ
8 Title 18 effluent standards and it has the ability to
9 meet EPA Class B biosolids for the sludge.

10 The next slide gives you an idea of how the
11 facility will look and also with the tanks underneath
12 where the process takes place. The process is
13 completely covered both for aesthetic reasons and odor
14 control and a number of reasons there. The equipment
15 is all covered and completely enclosed, as well.

16 If you go to the next slide, it shows us
17 the treatment process. We won't spend a lot of time
18 there, but that gives you an idea of the more technical
19 side of it. And what happens with the wastewater as it
20 enters into the lift station and then goes through grit
21 removal, screening, end of the secondary treatment, and
22 from the secondary treatment, into filtration and
23 disinfection, UV disinfection being the disinfection in
24 this facility.

25 The next slide shows us just the water

1 quality, as I've already stated, is Class A-plus
2 effluent. It will meet that requirement.

3 If you can hit the next slide, Brenda,
4 effluent water quality, just giving you an overview of
5 the EPA requirements for Arizona Title 18 and then what
6 we propose to provide in water quality from this PERC
7 ASP facility.

8 In our next slide we show the permitting
9 and other requirements that will be taking place to put
10 this facility at this site. We've obviously already
11 begun the MAG 208 Amendment.

12 The approval to construct will be one of
13 the next processes through Maricopa County
14 Environmental Services. We have submitted the APP, as
15 well, working on that, and the various other permits
16 that you see there. The anticipated project schedule
17 is what you see there.

18 On this new slide it shows you March 2003
19 to October 2003 for design, construction starting
20 sometime in November and ending sometime November 2004
21 with startup occurring in December 2004.

22 Finally, the effluent disposal. As we
23 mentioned earlier, discharge into the adjacent recharge
24 basins is going to be the primary disposal method. We
25 also are going to use underground storage and recovery

1 as well as AZ PDES discharge and then direct nonpotable
2 use will be potential irrigation of golf courses,
3 on-site reuse for process water, potential lake source
4 water and irrigation of landscaping for open spaces and
5 parks and things.

6 If you could go to the next slide we'll --
7 if there are any questions or --

8 MR. KLINGLER: We could hold the questions.
9 Now, was Steve going to comment, also?

10 MR. OWEN: Yeah. Let me turn some time
11 over to Steve Noel to discuss the recharge basins.

12 MR. NOEL: Mr. Chairman, members of the
13 committee, my name is Steve Noel. I'm with Southwest
14 Groundwater Consultants. I represent Tartesso. I'm a
15 hydrogeologist. We're working on the hydrogeology of
16 the aqua protection permit and underground storage
17 facility permit.

18 Briefly, there were two items that you
19 discussed in the last meeting on June 5th regarding the
20 hydrogeology. I've brought with me a copy for you
21 which is the hydrogeology for the aqua protection
22 permit.

23 This covers the basic regional and local
24 geology of the area of the hydrogeologic conditions,
25 depth to groundwater, groundwater flow, and the

1 interaction of the facility on the aquifer itself.

2 The second question that was brought up was
3 a little more specific, impact analysis on recovery
4 wells with respect to the Western Maricopa Combine
5 project. To that extent, we have met several times
6 with the consulting firm called Fluid Solutions which
7 represents Western Maricopa Combine and the City of
8 Goodyear in this case, and we talked about the basic
9 hydrologic characteristics, the aquifer conditions.

10 We came up to a consensus, I believe, in
11 terms of impacts that there would not be any negative
12 impact on any existing recovery well or potential
13 recovery well. We developed a preliminary model, the
14 hydrogeologic model of the area, and we discussed this
15 with Fluid Solution representatives. And we're in
16 agreement in the base coverage of what we were doing,
17 and they had done something very similar in terms of
18 evaluating impact.

19 With the situation being that there are no
20 existing recovery wells in the area, we don't really
21 show any impacts. We do show the mound rise as a
22 result of the recharge which is a positive to the
23 aquifer system because of the other uses, the other
24 development uses in the area. So that was an
25 agreed-upon positive.

1 Also, we think with the mounding at the
2 recharge facility, we would eliminate or reduce the
3 impact of the poor quality water from the south, the
4 very high TDS water from migrating north into the
5 future Tartesso well field and other well fields that
6 will be serving the communities as you go north from
7 Tartesso. Thanks.

8 MR. KLINGLER: Thank you, Steve. If you
9 would just hang loose here for a little bit and be
10 close by when we get to the committee discussion.
11 There may be some questions.

12 At this time, I would like to see if there
13 are any members who would like to make any comment.
14 I've got some cards from folks that have indicated, if
15 necessary, to speak. And let me just check to see if
16 it's necessary. Carroll Reynolds, is it necessary to
17 speak?

18 MR. REYNOLDS: I don't know if it's
19 necessary, but I will.

20 MR. KLINGLER: Okay.

21 MR. REYNOLDS: Carroll Reynolds with Town
22 of Buckeye, public works director.

23 The State of Arizona has been concerned
24 about management of our water resource for a number of
25 years now. And in the management program and process,

1 they have established regulatory requirements that
2 control the quality of water that is produced by
3 wastewater treatment plants and control and monitor to
4 a very great degree the quality of water that is
5 introduced into the groundwater facilities.

6 In the past, water from treatment plants
7 were monitored for discharge, but there was not real
8 monitoring for water that actually entered the aquifer.

9 In today's society, with recharge
10 facilities, there's a number of requirements that ADEQ
11 has applied to make sure that the water that's being
12 stored in the groundwater is suitable for storage. And
13 that includes not just the requirements from the
14 treatment plant as was said earlier by a PERC
15 representative, treatment facility produces a Class
16 A-plus water. Additionally, it produces a lower TDS
17 water than that produced by CAP which our vice mayor
18 has pointed out.

19 To take it a step further, in California,
20 they initiated a groundwater mounding process to
21 prevent sea water intrusion. We have something sort of
22 equivalent to that with very high TDS waters to the
23 south in a bogged area, that given groundwater
24 production rates, that could create a draw-down and
25 allow that portion of the aquifer to become down

1 gradient. That would encourage migration, as Steve
2 Noel pointed out, into the groundwater in this area,
3 something that I think is very important to prevent for
4 the protection not only of the Town of Buckeye, but if
5 the American Combine project ever got off the ground,
6 it would provide some degree of protection for that
7 also, depending on location.

8 I guess in closure I would just say that
9 management of this resource, the technology for
10 treatment have all reached a level in the state of
11 Arizona that we have reliable treatment technologies.
12 We have reliable monitoring technologies. And the
13 management of the resource is paramount to the future
14 of all communities, not just Town of Buckeye.

15 A decision such as this would also impact
16 places such as linear recharge projects along the
17 Aqua Fria and other areas. And I think it's important
18 to consider the long-term implication of not allowing
19 recharge to occur.

20 MR. KLINGLER: Thank you, Mr. Reynolds.
21 Good time management. Also have Woody Scouten that
22 said if necessary.

23 MR. SCOUTEN: No.

24 MR. KLINGLER: Not necessary. And Steven
25 Earl if necessary.

1 MR. EARL: Members of the committee, for
2 your record, my name is Steven Earl. I'm here today on
3 behalf of Stardust Development who is the owner of
4 Tartesso.

5 Because at the last hearing there was a
6 question raised by Western Maricopa Combine as to
7 whether or not the effluent pond and the percolation
8 down into the groundwater could somehow effect a
9 potential well site or sites in the future, we have had
10 a series of discussions. I want to make sure I
11 understand the nature of the concern.

12 As I understand what Western Maricopa
13 Combine has proposed is a turn-out structure at the CAP
14 which will bring potentially as much as 25,000 acre
15 feet of water out of the CAP. They don't yet have an
16 agreement with any city to do this but are working
17 with, I guess, Goodyear and others, to put the water
18 into the Hassayampa River and let it percolate down
19 into the groundwater at that location.

20 Now, that happens to be up in an area where
21 I have clients. Douglas Ranch, Festival Ranch,
22 Sun Valley. So that untreated water is being put in
23 there. And then down 13 miles away near the I-10 in
24 the area of Tartesso they are seeking to withdraw that
25 water which is not really there but really groundwater

1 which is in the Town of Buckeye and then put it in a
2 pipe and send it 15, 18 miles away to other cities.
3 Then there was a concern raised as to whether or not
4 the effluent ponds would somehow intermix with the
5 groundwater and could affect that recovery.

6 As far as I have been told by Steve Noel
7 and other experts and the experts at the town, the
8 effluent that we're putting in here is A-plus effluent.
9 It's the type and quality of water that could be put
10 into a domestic system as it percolates down into the
11 groundwater system.

12 So I asked Steve Noel, and he assured me
13 there is no negative impact which was important. And
14 so at this point, we would say Western Maricopa Combine
15 also has the opportunity to present these issues in
16 front of the APP process, the DWR process, as well as
17 the state process for environmental quality.

18 We have submitted our application. We
19 assume that we will continue to work on this issue, but
20 it appears that we've located this plant properly.

21 MR. KLINGLER: Thank you, Mr. Earl. I
22 don't have any more cards at this point. Is there any
23 other member of the public who would like to speak? We
24 do have one more. Norm Fain, Fluid Solutions.

25 MR. FAIN: Thank you, members of the water

1 quality committee and Mr. Chairman. My name is Norm
2 Fain with Fluid Solutions and I'm here representing
3 Western Maricopa Combine and the potential users of
4 that project which include all of the cities including
5 Buckeye should they participate in the project.

6 The project, to answer a question that was
7 asked before, consists of taking CAP water, recharging
8 it in the river for recovery and use as a CAP surface
9 water renewable source to communities who are not along
10 the CAP.

11 The concern that we've had is not that this
12 project is a bad project. We think that the Tartesso
13 recharge project is a benefit to us. What we want to
14 make sure is that the water quality doesn't create
15 problems for us down the road. We have met with Steve
16 Noel, and we've all come to an agreement that the time
17 in the aquifer with their project is not going to be a
18 problem.

19 We believe at build-out conditions for all
20 the projects out there, there is over 1.2 years in the
21 aquifer. We put together a list of considerations
22 where we estimated we needed a year. California's
23 Title 22 requires six months, but California's Title 22
24 also requires a 50 percent blend with a noneffluent
25 before recharge. They also require that if you're less

1 than 500 feet from the well that your TOC coming out of
2 that wastewater treatment plant is less than half a
3 milligram per liter. We asked for 1,000 feet which I
4 think we can achieve. I don't think there is any
5 problem there.

6 We did give Tartesso some statements as
7 charged by Mr. Anderson at City of Goodyear to
8 consider, and our purpose in this wasn't to get the 208
9 process to say, "You will do this."

10 Our purpose in this was to get the 208
11 process to state that ADEQ will review this without
12 question during the APP process. And the questions
13 that we don't have answers back yet on regard water
14 quality.

15 What we asked for, after looking at Arizona
16 requirements, Title 22 California requirements, and
17 applying some common sense, was that the total organic
18 carbon impact in any potable well will create an
19 increase of less than 1 milligram per liter in that
20 well from ambient conditions, that there will be a
21 limitation put on the nitrogen that can be increased in
22 that well, whether it's a recovery well or another
23 potable well in the area, and that the endocrine
24 disruption chemicals and pharmaceuticals that we're
25 just starting to learn about be monitored so that if

1 there's a problem in the future we can look at it.
2 We're not asking the two-way process to establish a
3 guideline here. All we're asking the two-way process
4 to do is to stipulate the ADEQ, through the APP
5 process, will look at these issues.

6 We've given this to Tartesso and have not
7 received a response to those specific issues relating
8 to water quality as of yet. We are in the agreement on
9 the time in the aquifer and the movement of the mound.
10 Thank you.

11 MR. KLINGLER: Thank you, Steve. At this
12 point, are there any other members of the public that
13 would like to speak? Do you have any more cards,
14 Brenda?

15 John Mihlik from Western Maricopa Combine.
16 While you're approaching, I'll just mention, if there's
17 anybody else who would like to speak, just give a card
18 to Brenda and we'll get it rolling here.

19 MR. MIHLIK: Mr. Chairman, members of the
20 committee, thank you very much for the opportunity.

21 I think we've heard that we're not opposing
22 this project. We're just saying we would like to see
23 some safeguards built into the project to make sure
24 that the future doesn't hold any major surprises for
25 us.

1 One of the things I think is important that
2 they should know is that there is a community of 150
3 homes out there right now within a couple miles of that
4 particular site that they're talking about. Nobody has
5 mentioned that. I think it's very important that you
6 know that that's real. They're real. They've been
7 there since the 1980s and '90s.

8 Our recharge project is on its way. We
9 have built a siphon sheet into the side of the canal.
10 We expect to have that project complete in another 60
11 or 90 days. So the recharge is real, too.

12 We have definitely received a letter of
13 intent from the Town of Goodyear that they would like
14 to participate in our water line. And so that's about
15 as real as you can get except for the actual contract.

16 So I do want you to know that we're
17 concerned for real reasons. We've been there a long
18 time, as long as the Town of Buckeye, that's for sure.
19 And so we're trying to cooperate, and we'll do whatever
20 is reasonable. But we do want you to take into
21 consideration that the future holds a lot of things
22 that we're not aware of, and we'd just appreciate the
23 additional monitoring. Thank you very much.

24 MR. KLINGLER: Any other public comment?
25 Any other cards? Anybody else? Okay. At this time

1 then, I would like to close the public hearing.

2 (The public hearing portion of the
3 proceedings adjourned at 4:28 p.m.)

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1 STATE OF ARIZONA)
2 COUNTY OF MARICOPA)

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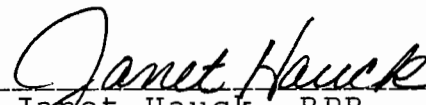
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I, JANET HAUCK, a Certified Court Reporter,
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full, true, and accurate transcript of all proceedings
had in the foregoing matter, all done to the best of my
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I FURTHER CERTIFY that I am not related to
nor employed by any of the parties hereto, and have no
interest in the outcome hereof.

WITNESS my hand this 6th day of August,
2002.



Janet Hauck, RPR
Arizona Certified Court
Reporter No. 50522